

MASSACHUSETTS
EYE AND EAR INFIRMARY



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Massachusetts
Eye and Ear Infirmary

ONE HUNDRED and THIRTY-FIRST

A N N U A L R E P O R T

REPORTS FOR 1957

STAFF AND OFFICERS FOR 1958



BOSTON 14, MASSACHUSETTS

Massachusetts
Eye and Ear Infirmary

ONE HUNDRED and THIRTY-FIRST
ANNUAL REPORT

REPORTS FOR 1957

STAFF AND OFFICERS FOR 1958



243 CHARLES STREET
Telephone: LAFAYETTE 3-7900

BOSTON 14, MASSACHUSETTS

MASSACHUSETTS EYE AND EAR INFIRMARY

INCORPORATED IN 1827

THE MASSACHUSETTS EYE AND EAR INFIRMARY and its Clinics serve men, women, and children from all over New England and beyond who need expert care for diseases and injuries of the eye, ear, nose, and throat. Established in 1824, the Infirmary is one of the two oldest hospitals in the country specializing in the preservation of good eyesight and sound hearing.

The Infirmary is a voluntary hospital — and independent, non-profit, private institution. The Board of Managers is non-paid and the Staff of specialists give their services without charge to patients in the clinics and to those patients who come into the hospital "on service." The hospital receives no support from city or state but is financed by receipts from patients, by voluntary gifts and bequests, and by its share in the United Fund as a "Red Feather Service." However, the Infirmary's allotment from the United Fund is not sufficient to cover the amount the hospital gives in "free service" to patients from the Greater Boston area who cannot pay for their own care.

In many ways the Infirmary and the Massachusetts General Hospital, its neighbor, cooperate to give complete medical service to patients. The Clinics of both hospitals share a common Admitting Office with its entrance on Fruit Street. Also, for maximum efficiency and economy, the two hospitals unite in such matters as purchasing, maintenance, and personnel management.

The Clinics and service beds at the Infirmary are open to those who are not able to pay doctors' fees, since the Staff give their services without charge to such patients. All patients in the Clinics and in the hospital are under the medical and surgical care of doctors on the hospital staff who are specialists in Ophthalmology and Otolaryngology.

Whenever the patient is already under the care of a doctor, arrangements for his admission to the Infirmary should be made by his own doctor, or the

patient should bring a letter from his doctor recommending admission to the hospital. However, any patient who is not under a doctor's care and who is not able to pay for private care, is eligible for treatment in the Clinics and service accommodations. In cases of emergency, of course, a patient is admitted immediately at any time of the day or night.

The Clinics, located on Fruit Street, are open daily except Sunday and legal holidays* for a fee of \$3.00† per clinic visit. After a preliminary interview, patients are examined by the clinic doctor and treatment is prescribed. If further treatment is necessary, the clinic patient is given an appointment for his next visit, as all but the first visit are by appointment only.

Patients are admitted to the service accommodations by direct appointment with the Admitting Office, 243 Charles Street, from 9 to 10 A.M. daily except Sunday and legal holidays. Arrangement for admission to private and semi-private accommodations is made by the Staff doctor in charge of the patient, who then comes on the appointed day to the Infirmary Admitting Office.

Daily rates for board and room for service patients are \$21.00.† For private and semi-private patients, five and six bed rooms are \$23.00* per day, four bed rooms are \$24.00* and two bed rooms are \$26.00* and \$27.00*, single room with lavatory, \$28.00† per day, and single room with bath from \$30.00 to \$36.00† per day. These rates include general nursing, ordinary medicine. Additional charges are made for operating room, X-Ray, laboratory tests, special nursing.

Blue Cross (Associated Hospital Service) plans are accepted at the Infirmary, the benefits being allowed as soon as approval has been received. All other non-profit insurance is handled by the patient for himself, and he pays the regular rates to the hospital.

* Ear, Nose and Throat Clinic not open Saturdays in July and August.

† As of March 1, 1958

ONE HUNDRED AND THIRTY-FIRST ANNUAL REPORT

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1958

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Mrs. Sullivan A. Sargent	701 South Street, Needham	1945
Walter H. Trumbull	185 Meadow Brook Road, Weston	1929
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* appointed by the Commonwealth

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(in addition to Managers)

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D. Harold Walker, M.D.	"Tree Tops," Peterborough, N. H.
Howland S. Warren	1 Federal Street, Boston

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Aram Roopenian, M.D.

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William P. Rogers, M.D.

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Robert E. Klotz, M.D.	Sidney R. Wilker, M.D.

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Robert Clubb, M.D.	August Stemmer, M.D.
Clark S. Collins, M.D.	Arthur Woodward, M.D.

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Geza Jako, M.D.	Raffaele N. Vallesi, M.D.
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Walter A. Rosenblith, Ing Rad.

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Nelson Y. Kiang, Ph.D.

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MASSACHUSETTS EYE AND EAR INFIRMARY

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MASSACHUSETTS EYE AND EAR INFIRMARY

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Otto Krayer, M.D.

Consultant in Preventive Medicine
John E. Gordon, M.D.

Sylvester B. Kelley, M.D.
Walter S. Kerr, M.D.
Wyland F. Leadbetter, M.D.

Saul M. Marcus, M.D.
Howard I. Suby, M.D.
Lorande M. Woodruff, M.D.

Consulting Urologists

Consulting Endocrinologist
Edward B. Benedict, M.D.

Consulting Pathologists

Benjamin Castleman, M.D.
Richard B. Cohen, M.D.
Winfield S. Morgan, M.D.
Agnes Burt Russfield, M.D.

Robert E. Scully, M.D.
Donald C. Sniffen, M.D.
David Spiro, M.D., Ph.D.
Edgar B. Taft, M.D.

Austin L. Vickery, Jr., M.D.

Consulting Radiologists

Milford D. Schulz, M.D.
Laurence L. Robbins, M.D.
Stanley M. Wyman, M.D.

Consulting Bacteriologists

Louis Dienes, M.D.
Lawrence J. Kunz, Ph.D.

1958 Service Awards

Members of the Medical Staff who have served 25 consecutive years on the active staff:

Brendan D. Leahey, M.D.

Werner Mueller, M.D.

Lea Cook
Social Service

Thirty Year Pins
Thelma H. Farmer, R.N.
Refraction

Henrietta I. Olsen, R.N.
Admitting Office

Ernest M. Smith
Accounting

Ten Year Pins

Patricia Walsh
Dietary

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The Clinics

Howe Laboratory of Ophthalmology

Director — David G. Cogan, M.D.

Eugene C. Ciccarelli, M.D. Harold L. Kern, Sc.D. Pei-Fei Lee, M.D.
David D. Donaldson, M.D. Jin H. Kinoshita, Ph.D. Lorenzo O. Merola, B.S.
W. Morton Grant, M.D. Toichiro Kuwabara, M.D. Robert R. Trotter, M.D.

Winthrop Foundation and Clinic for the Deaf

Surgeon in Charge — Philip E. Meltzer, M.D.

Audiologist — Albert W. Koch, Ed.D.

Executive Committee

D. Harold Walker, M.D., *Chairman* Philip E. Meltzer, M.D.
LeRoy A. Schall, M.D. Moses H. Lurie, M.D.
Donald K. Lewis, M.D. Francis L. Weille, M.D.

Retina Foundation

Director — Charles L. Schepens, M.D. Associate Director — Endre A. Balazs, M.D.

Aksel A. Bothner-By, Ph.D.
Christine T. Bothner-By, Ph.D.
Robert J. Brockhurst, M.D.
Gordon L. Brownell, Ph.D.
S. James Bullington, M.D.
Anima Devi, Ph.D.
Marcella H. DeRoche, B.A.
Elizabeth Ann Eckl, B.A.
Mariano L. Galainena, M.D.
Allen R. Gaynor, B.S.
John Gergely, M.D., Ph.D.
Arthur F. Howe, Ph.D.
Marie A. Jakus, Ph.D.
Marjanna Jansen, B.A.
Christine D. Jardetzky, Ph.D.
Juanita M. Johnson, B.A.
Charles V. Mahlmann, M.S.
Alice R. McPherson, M.D.
Emery Nyilas, Dipl. Eng.
Ichiro D. Okamura, M.D.
Adolph Pietruszkiewicz, B.S.
Uthai Rutnin, M.D.
Marion A. Ryan, B.A.
John G. Sebestyen, M.D.
Michael Shea, M.D.
Alice F. Spencer, B.S.
William J. Stenstrom, B.S.
Thomas P. Stratford, M.D.
Lars Sundblad, M.D.
Laszlo Z. J. Toth, Ph.D.
Laszlo Varga, Ph.D.
Silvio R. von Pirquet, M.D.
Ernst Wolf, Ph.D.
Claudine Z. Yannoni, B.A.
Benjamin Ziv, M.D.
Michael J. Zigler, Ph.D.

Boston Eye Bank Serving New England

Executive Committee

Edwin B. Dunphy, M.D.
Brendan D. Leahey, M.D.
Mrs. William A. Slade, Jr.

Henry Hixon Meyer
Mrs. Richard Cary Curtis

General Director: Garrett L. Sullivan, M.D.

Executive Secretary: Nancy A. Hunt

MASSACHUSETTS EYE AND EAR INFIRMARY

Treasurer's Report

BALANCE SHEET
September 29, 1957

ASSETS

Cash in Bank and on Hand	\$ 565,089.08
Investments - Book Value:	
Securities	\$3,989,498.07
Interest in parcel of real estate	1.00
Interest in unsettled estate	1.00
	3,989,500.07
Accounts Receivable:	
Patients - less reserve for doubtful accounts	\$ 119,813.03
Miscellaneous	3,366.74
	123,179.77
Inventories of Supplies, etc.	21,386.17
Plant:	
Land and buildings acquired prior to	
January 1, 1949 (book value)	\$ 491,741.99
Additional facilities acquired since	
January 1, 1949 (cost)	2,066,608.08
	\$2,558,350.07
Less: Reserve for depreciation	410,250.00
	2,148,100.07
Construction in Progress	107,979.72
TOTAL	\$6,955,234.88

LIABILITIES AND FUNDS

Advances from Patients	\$ 2,617.23
Accounts Payable and Accruals	98,437.30
Special Funds	7,197.16
General Fund	3,097,270.92
General Pension Reserve	223,825.94
Research Fund	8,000.00
Permanent Funds - Income Restricted	904,716.11
Permanent Funds - Income Unrestricted	2,231,368.58
Special Purpose Funds	339,480.28
Unexpended Restricted Income of Permanent Funds	42,321.36
TOTAL	\$6,955,234.88

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INCOME ACCOUNT

For the period ended September 29, 1957 (52 weeks)

HOSPITAL INCOME AS PER DIRECTOR'S REPORT		\$1,754,767.88
Less: Hospital Expenses as per Director's Report — see Note	\$2,109,109.25	
Hospital Operating Expenses Charged Directly Against Permanent Funds	70,889.61	
		\$2,179,998.86
Deduct: Hospital Operating Expenses Charged Directly Against Permanent Funds:		
Permanent Funds — Income	\$16,770.93	
Permanent Funds — Principal	54,118.68	\$ 70,889.61
NET HOSPITAL EXPENSES		2,109,109.25
EXCESS OF HOSPITAL EXPENSES OVER HOSPITAL INCOME		\$ 354,341.37
Income from Investment Securities, less Income Applicable to Restricted Funds and to General Pension Reserve		\$ 181,676.86
Receipts from United Community Services, Committee of the Permanent Charity Fund, Inc., Estates of Elisha V. Ashton, G. Gorham Peters and Others		55,587.79
Less: Treasurer's Disbursements	\$ 237,264.65	
		15,522.99
		221,741.66
DEFICIT FOR THE PERIOD		\$ 132,599.71

Note: Includes provision for depreciation — \$115,250

AUDITORS' CERTIFICATE

We have examined the balance sheet of MASSACHUSETTS EYE AND EAR INFIRMARY as at September 29, 1957 and the related income account for the period ended at that date (52 weeks).

Our examination was made in accordance with generally accepted auditing standards and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

The accompanying statements reflect a provision for depreciation in the amount of \$115,250 based on a percentage of the patient care expenses of the Infirmary. This provision has been recorded in accordance with the requirements of statutory authority pertain-

ing to per diem reimbursement for hospital services rendered under contract with certain third party agencies. We are unable to express an opinion as to the adequacy of the provision for depreciation in relation to plant costs.

Subject to the exception noted above, in our opinion, the accompanying balance sheet and related income account present fairly the financial position of Massachusetts Eye and Ear Infirmary at September 29, 1957 and the results of its operations for the period ended at that date, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding period.

PATTERSON, TEELE & DENNIS

MASSACHUSETTS EYE AND EAR INFIRMARY

SUMMARY OF INVESTMENTS

(As of September 27, 1957)

BONDS:	Book Value*	Market Value*	% of Market Value
U. S. Government	\$1,091,926	\$1,054,074	17.3
Canadian Government	53,000	48,262	0.8
Railroad	197,134	153,477	2.5
Public Utility	145,932	131,449	2.1
Industrial	184,553	173,613	2.9
Financial	17,843	16,380	0.3
Miscellaneous	1,900	1,900	—
TOTAL BONDS	\$1,692,288	\$1,579,155	25.9
PREFERRED STOCKS:			
	\$ 141,929	\$ 151,162	2.5
COMMON STOCKS:			
Railroad	\$ 181,068	\$ 293,906	4.8
Public Utility	416,799	672,080	11.0
Industrial	891,318	2,408,302	39.6
Bank and Finance	300,659	389,182	6.4
Insurance	244,287	418,582	6.9
Investment Trust	25,000	45,325	0.7
TOTAL COMMON STOCKS	\$2,059,131	\$4,227,377	69.4
TOTAL GENERAL FUND	\$3,893,348	\$5,957,694	97.8
WEBER FUND	10,500	10,500	0.2
WINTHROP FUND	85,650	119,582	2.0
GRAND TOTAL	\$3,989,498	\$6,087,776	100.0

* Cents omitted.

OPERATING ANALYSIS

For the period ended September 30, 1957 (52 weeks)

Income from Patients	\$1,875,279.56
Income from Other Sources	78,361.64
TOTAL GROSS HOSPITAL INCOME	\$1,953,641.20
Allowances to Patients for "free care"	114,990.58
Further Deductions for Bad Debts	17,055.10
Allowances to Blue Cross and Other Agencies	66,827.64
TOTAL FREE SERVICE	\$ 198,873.32
NET INCOME	1,754,767.88
Salaries and Wages	\$1,150,714.32
Supplies and Expenses	614,257.21
Clinic Expenses	228,887.72
Extraordinary Expenses	—
TOTAL OPERATING EXPENSES	\$1,993,859.25
DEPRECIATION	115,250.00
HOSPITAL DEFICIT	239,091.37
TOTAL HOSPITAL DEFICIT	\$ 354,341.37

HORACE W. FROST,
Treasurer

ONE HUNDRED AND THIRTY-FIRST ANNUAL REPORT

Administration

Director	Francis S. Hill
Assistant Director	Charles T. Wood
Comptroller	Raymond W. Lyons
Administrative Assistant	Kenneth W. Cadman
Administrative Assistants, Admitting Office	Henrietta I. Olsen, R.N. Ruth W. Hutchinson, R.N. Mrs. Ruth Gutteridge, R.N. Ruth Straitiff

Development and Resources

Associate Director	Denholm M. Jacobs
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Nursing Department

Director of Nursing Service and Nursing Education	Mrs. Margaret Verrill, R.N.
Assistant Director of Nursing Service	Elizabeth Ahearn, R.N.

Directors of Departments

Dietary	Patricia Walsh
Housekeeping	William M. Cohan
Medical Social Service	Isabel Whiting
Occupational Therapy	Mary Ellen Hill
Optical Shop	Albert E. Maver
Public Relations	Mrs. Virginia Gerould

Directors of Units

Librarian	Charles Snyder
Patients' Accounts	Irwin Hertz

Directors of Affiliated Departments

Director, School of Nursing and Nursing Service	Ruth Sleeper, R.N.
Director of Dietetics, School of Dietetics	Louise Hatch
Medical Records	Mary E. Converse
Maintenance, Assistant	Joseph W. Degen
Personnel Director	Edmund R. Mattos
Purchasing Agent	Joseph Hill

Comparative Statistics

HOSPITAL

	1956	1957
Service Patients — Eye Cases	1,481	1,438
Ear, Nose and Throat Cases	1,204	1,399
<i>Total Service Patients Admitted</i>	2,685	2,837
Private Patients — Eye Cases	2,627	2,614
Ear, Nose and Throat Cases	2,406	2,603
<i>Total Private Patients</i>	5,033	5,217
Total Patients Admitted	7,718	8,054
Operations, Service — Eye Cases	1,365	1,345
Ear, Nose and Throat Cases	988	1,112
Operations, Private — Eye Cases	2,776	2,754
Ear, Nose and Throat Cases	2,189	2,588
Total Operations	7,318	7,799

CLINICS

New Patients — Eye Clinic	5,014	4,850
Ear, Nose and Throat Clinic	2,600	2,538
<i>Total New Patients</i>	<i>7,614</i>	<i>7,388</i>
Revisits — Eye Clinic	37,355	39,258
Ear, Nose and Throat Clinic	19,303	18,969
<i>Total Clinical Revisits</i>	<i>56,658</i>	<i>58,227</i>
Visits — Eye Clinic	42,369	44,108
Ear, Nose and Throat Clinic	21,903	21,507
<i>Total Clinical Visits</i>	<i>64,272</i>	<i>65,615</i>
Emergency Patients Admitted to Hospital	169	196
Patients Admitted to Emergency Ward	5,037	6,580

Comparative Statistics

	1956	1957
Patients Days Care — Service	19,975	18,959
Private	29,293	28,767
TOTAL PATIENTS DAYS CARE	49,268	47,726
Average Number of Patients Treated Daily —		
Service	55	52
Private	81	79
TOTAL AVERAGE TREATED DAILY	136	131
Average Number of Days Patients Remain — Service	7.4	6.6
Private	5.8	5.5
Beds Available and Percent of Occupancy — Service	86 64%	62 63%
Private	104 77%	102 78%
TOTAL BEDS AVAILABLE	190	164
Per Capita Cost Per Day — Service, Routine Care	\$18.65	\$21.32
Special Services	7.83	8.98
TOTAL COST PER DAY PER SERVICE PATIENT....	\$26.48	\$30.30 (A)
Per Capita Cost Per Day—Semi-Private, Routine Care	\$20.72	\$23.69
Special Services	8.70	9.97
TOTAL COST PER DAY PER SEMI-PRIVATE PATIENT	\$29.42*	\$33.66 (A)
Per Capita Cost Per Day — Private, Routine Care	\$23.83	\$27.24
Special Services	10.01	11.47
TOTAL COST PER DAY PER PRIVATE PATIENT	\$33.84*	\$38.71 (A)
Condition of Service Patients on Discharge — Died	11	12
Autopsies	63%	33%
Left Against Advice	0	1
Discharged	2,689	2,839

* With Depreciation Added.

* Overhead Ratio 25%.

(A) Overhead Ratio 27%.

Statement by the President

It has become increasingly apparent during the past 10 years, while the Infirmary has been devoting much of its attention to the renovation of facilities and their expansion, that the public generally does not understand either the place which hospitals occupy in the medical world or the problems with which they are faced. I have taken every opportunity to quiz the man in the street, taxi drivers, policemen, passengers on the M.T.A., stenographers, carpenters, mechanics, patients in the clinics, to mention a few. Almost without exception they have believed that hospital rates are outrageous, that the doctors on the staff are getting rich at the expense of the poor and that a large part of every hospital bill goes to pay the cost of programs, such as teaching and research, which are of no concern to the sick patient. Many I have talked with became quite excited and emotional on the subject even though they had had little actual experience with hospitals.

Several months ago I rode to the Infirmary from State Street with a taxi driver who has driven me occasionally. He asked me what I had to do with the institution and when I admitted my responsibility inquired bluntly, "What do you get paid?" My reply stumped him completely. Several blocks further along he pulled over to the sidewalk, turned around in his seat and proceeded to tell me in some detail that he had taken a sick child to another hospital where a complete cure had been effected after some weeks. He was delighted with everything except the bill which though cut in half was, of course, a real financial hardship for him to liquidate. He volunteered that he had taken his little girl to that hospital because he knew they would cure her if it were at all possible.

We had a long talk during which we covered just about every aspect of the hospital problem. I explained that the Trustees and Officers of the Infirmary served without compensation, that the doctors on our staff donated their services in the clinics and to service patients and that the hospital's charges to clinic patients and service patients were remitted or reduced to fit the financial status of the patient. We discussed

hospital costs, the need for nursing round the clock, the ancillary services and even teaching and research. He realized for the first time that his sick little girl had profited from teaching and research conducted in the past and paid for by others and that his bill should properly include some of the cost of teaching and research from which others, possibly another of his own brood, would profit in the future.

"WHY DON'T YOU TELL EVERYBODY. . . ."

Then we drove on to the Infirmary. He shut off his meter before I could read the amount and said, "The least I can do is to give you a free ride. Why don't you tell everybody what you have been telling me?"

About 10 years ago the Infirmary established a public relations department. It was a leader in that field. Now almost every other hospital has such a department. While much good has been accomplished by these individual efforts, the surface has only been scratched. We, I mean all the hospitals, must now by group action make a concerted and sustained effort to tell our wonderful story to the public and to explain our problems, financial and otherwise. Only so can we benefit from the advice of my friend, the taxi driver.

I am exceedingly happy that the Massachusetts Hospital Association recognizes the need for such action. It is the logical and proper body to undertake the exciting task and should proceed with alacrity, diligence and continuity. This is no part-time program. May every member hospital realize the importance of the effort and give to the Association every possible support.

The facts and figures contained in this One Hundred and Thirty-First Annual Report of the Infirmary are highly gratifying to the Managers because they demonstrate so clearly forward progress in every field of its endeavor. On behalf of the Managers I thank everyone for his part in this success.

HENRY HIXON MEYER
President

Report of the Director

THE 131st year at the Infirmary was mainly occupied with further important progress in the hospital renovation program started 10 years ago. The decision to proceed with the conversion of the ward areas into more flexible four-bed rooms, to modernize completely the X-Ray Department, and to construct a new Central Supply Room brought the end of the reconstruction of the building, originally erected in 1898, in sight.

The vote to modernize and convert the second and third floors was taken by the Board of Managers on April 3rd. The contractors took over on June 27th as patients on the second floor were moved to other parts of the hospital and extra beds were set up in every available space for the duration of the construction period. In this way, we are caring for patients without a major curtailment in bed occupancy.

This construction is so important to the hospital that the following excerpts from the report of the Building Committee to the Board of Managers seems of interest:

"For the last 10 years, while the total number of patient days has varied but little, a very definite trend has developed toward fewer and fewer service cases at the Infirmary with a corresponding increase in private cases. This trend will probably continue as a result of the steady increase in third-party payments. A recent example is the coverage by Blue Cross of all service men's dependents. This coverage might well extend to all federal employees in the years to come as several bills are in Congress at the present time which include hospitalization insurance.

"Because of the declining trend in ward admissions and because our large open wards are outmoded, the Committee recommends the conversion of the second and third floors into four-bed rooms with toilet facilities in each room. These rooms would be considerably more flexible as men or women, eye or ear, nose and throat patients can be accommodated in any room on either floor. Although the construction will reduce the actual number of beds, we anticipate an increase in occupancy due to the added flexibility which in the long run should produce enough revenue to pay for the remodelling."

By fall the Board of Managers had also decided to go ahead with three other major construction proj-

ects: the renovation of the X-Ray Department, the addition of an enlarged Central Supply Room, and construction of an Auditory Physiology Laboratory in the courtyard, to be known as the Eaton-Peabody Laboratory (a report of which will be given by the Chief of the Otolaryngological Service).

Other improvements undertaken during the year were the air-conditioning and rewiring of the new DeBlois Operating Room in the ear, nose and throat suite, the renovation of the Anesthesia Department and the recovery room, installation of new filters in the operating rooms, a new cat-walk from the House Officers' Flat in the Gardner Building, and the addition of a new doctor's dining room. With so many projects in progress at one time, it is little wonder that our personnel, particularly the Housekeeping Department, should look forward to completion of this program of progress. Planning these changes was a time-consuming but always interesting and stimulating undertaking in which many hospital departments participated.

FACTS BEHIND THE FINANCIAL REPORT

The financial report for the year is somewhat distorted by the reduction in bed occupancy from June 27 to September 30 caused by the elimination of beds during construction. Forty-two beds were closed in the summer months. In spite of this curtailment, the deficit was held to a reasonable \$17,000 before depreciation.

Total operating expenses increased \$150,000 and amounted to approximately \$2,000,000. Salaries and wages, as in recent years, accounted for a substantial part of the increase. The average cost per patient day for routine service nursing care, meals, housekeeping, etc., was \$22.35, and special services—operating room, anesthesia, x-ray and laboratory tests, were \$9.41, a combined total of \$31.76, up \$4.00 over 1956.

Like everything else, the cost of running hospitals is going up each year. This is not only due to general inflation but also because hospitals must keep up with new medical developments and buy new, improved equipment. Furthermore, hospital employees, especially nurses and other trained personnel in short supply, must be paid salaries in line with their training and experience.

In the past, increased costs have been met by rais-

ing the daily rate for hospital room and board. However, there are many services performed by the hospital which cost the same amount of money regardless of how long a patient stays; for example, the services of the Admitting Office, the Medical Records Department, or the Accounting Department are about the same for the patient who remains two days as for the one who stays two weeks.

In order to meet the increased costs resulting from the substantial increases in nursing and other salaries, the Eye and Ear Infirmary, along with most of the hospitals in Greater Boston, put into effect in July an initial service charge of \$15.00.* Such a charge seems fairer to our patients than the alternative of increasing room rates by \$2.00 or \$3.00 per day in order to bring charges in line with costs. If the traditional board and room raise had been followed, the daily increase would have fallen most heavily on patients such as our laryngectomy cases who are most seriously afflicted.

Although hospital costs are going up, we are glad to point out that patients coming to the Eye and Ear are, in most cases, staying a shorter time. This trend is dramatically illustrated by two examples. Up to a few years ago, separated retina cases remained in the hospital 30 days; today they are up and out within 10 days with a much higher per cent showing greatly improved results. Again, patients coming to the Infirmary for the stapes mobilization operation to relieve deafness only have to remain for 48 hours; formerly many of them would have had a more drastic operation requiring 10 days or more hospitalization.

Advances such as these save the patient not only hospital expense but, even more important, valuable time away from business or profession. The average stay at the Infirmary has now been reduced to less than six days—one of the lowest among hospitals in Massachusetts.

This rapid turnover of patients makes the Infirmary a busy hospital for its size, judged by number of beds—171. For the year ending in September, more operations were performed here than in any other hospital in the state with two exceptions, both hospitals with a large number of beds.

NURSING REORGANIZATION

For the Nursing Department, 1956-57 can be seen as a year of reorganization. In February, Mrs. Althea B. Brady resigned and after a short transition period, Mrs. Margaret Verrill, a supervisor in the Department for two years, was appointed Director. Many changes

* Editor's note: On January 16, 1958, the initial service charge was withdrawn and room rates were increased \$2.00 per day in all categories.

were made in other supervisory personnel and much work was done in reviewing and revising procedures.

The number of part-time nurses was reduced and they were replaced by either full-time or licensed practical nurses. This latter group increased from one to 10 during the year and were found so satisfactory that added responsibilities were given them. The four month post-graduate course in eye and ear nursing was attended by more nurses than in recent years and a graduate course for the licensed practical nurses was started.

The drastic shortage of nurses, so apparent last spring, lessened during the summer and fall. It is our belief that pleasant working relationships as well as the substantial increase in salary scale brought about this change. An example of such relationships is the great interest and assistance given by the staff doctors on the Nursing Committee who spend many evening hours devising ways to make nursing more attractive at the Infirmary. Again, it is thanks to the continuing interest of the Ladies Visiting Committee that the nurses' Residence is now most attractive and in demand as living quarters by our nursing staff.

During the second and third floor construction, a Central Supply Room was set up by the Nursing Department in the Surgeons' Parlor. Information gained from this temporary move was used in designing the permanent Central Supply Room to be located in the basement opposite the kitchen.

THE LVC GIFT SHOP

This initial year of the Ladies Visiting Committee Gift Shop has from the opening last Christmas given every indication of being highly successful. The colorful shop window is a great addition to the hospital entrance and the wide variety of attractively priced merchandise has proved a real convenience to the patients, their visitors and to each and every member of the hospital personnel. The wide group of LVC volunteers behind the counters make a distinctive contribution to the pleasant atmosphere not only of the Shop but for the hospital in general.

The Ladies Visiting Committee volunteers wear the cherry red smocks worn by hospital volunteers everywhere. Other regular wearers of the cherry smocks are our faithful corps of volunteers who assist in the clinics and the students from the nursery training colleges in Boston who come during the school term for field work, serving in our Children's Wing playroom under the supervision of the Occupational Therapy Department.

EFFICIENT NEW EMERGENCY ROOMS

In February the newly constructed emergency suite,

ONE HUNDRED AND THIRTY-FIRST ANNUAL REPORT

adjacent to the front entrance, was opened. Although it is too early to have statistics on the first full year of operation, there is every indication that the new rooms are filling a great need and furthermore, are attracting many new patients to the hospital. Emergency visits for the year increased from 5,206 to 6,776.

In the morning, when emergencies are seen in the clinics, these rooms are available to our staff doctors and their private patients for examination and minor surgical procedures. In both its capacities, the emergency suite is proving more convenient, efficient and pleasant for our patients.

DIETARY DEPARTMENT IMPROVEMENTS

Physical changes made during the year in the dietary areas have added greatly to the Department's appearance. In the fall lighting and painting of the therapeutic dietitian's office was completed.

The new Doctors' Dining Room was opened just prior to Christmas and, as planned, its seating capacity of 30 restricted to doctors. This has relieved the noontime seating problem even though meals served in the cafeteria continued to increase with 2,300 additional servings this year. In the spring, the cafeteria itself received a "facelifting" in the form of new lighting and redecorating. The decorating scheme was of rather a spectacular nature which brought forth many comments and compliments and was interesting enough to be written up in the Dietetic magazine.

Plans for reversing the meal pattern by serving luncheon at noon and the main meal at night was accomplished and gratefully received by the patients. A corresponding change for the service floors gives them a later meal hour and the Dietary Department hopes soon to extend to service patients the advantages of a selected menu.

IMPORTANCE OF SOCIAL SERVICE

The budget for our Social Service Department for the past year was \$50,000. This sum might appear high in relation to the size of the Infirmary but the Board of Managers feel it is more than justified in consideration of the serious implications of eye and ear disorders and also the large number of patients who come every day to our clinics.

Of special interest to the eye social workers have been the monthly meetings with the Division of the Blind and the St. Paul's Rehabilitation Center for the Blind. Through these meetings coordination and im-

provement of respective functions, in the interest of the patients, has been achieved.

On the Ear, Nose and Throat Service, there has been an increase in the number of patients referred to Social Service because of the mounting number of laryngectomy cases seen in the hospital. As most of these patients are men past middle age, they present unusual rehabilitation problems.

The personnel are constantly stimulated by the teaching regularly carried on in the Department. Last year four students, two each from Boston College and Simmons, were with us. Much thought goes into planning for these students and the department members also lecture to student nurses once a month and, by invitation, have spoken twice to the eye residents. In addition, lectures to outside agencies and participation in national and local society meetings make a contribution to social work on a wide basis.

IMPORTANT COMMITTEE PLANNING

On the suggestion of the Medical Staff, the Infections Committee was organized and has met regularly since April. This committee is composed of two doctors on the visiting staff, one from each service, the Director of Nursing, the Pharmacist, the Bacteriologist and the Administrator. The purpose of the committee is to consider the entire problem of hospital infections, and to review procedures and establish routines for their prevention. Such a group, constantly on the alert to improve sterile techniques and cleanliness in general throughout the hospital is an added protection to our patients.

With most of the goals of the 10 year building program in sight, the Planning Committee during its several meetings this year has been looking into future needs and ideas for further growth and progress. As improvements have often had to be made at the cost of beds, more bed space is high on the priority list for any future expansion. A suitable auditorium for the many meetings held at the Infirmary would undoubtedly be included in these expansion plans. The lack of parking space is a growing problem tied up with the whole question of the future development of the area in which the hospital is located. These needs are being explored and their solutions will be in the reports of the future as no modern hospital can ever rest on its laurels.

FRANCIS S. HILL
Director

Department of Ophthalmology

DURING the past year several changes have taken place on the ophthalmic staff. Dr. Paul Chandler, who has been Chief of the Monday Service for so long, has become a Consulting Surgeon and also occupies the newly created position of Associate Director of Resident Training.

The Infirmary continues to be a popular place for residency training in ophthalmology. We are fortunate in having a big list of applicants to choose from and we have obtained some excellent residents for the next two years. At the moment, the first vacancy is January 1960.

The Infirmary has received an institutional training grant from the U. S. Public Health Service to help finance certain residents who might wish to enter academic ophthalmology. The first candidate for this special training has been chosen from our current group of residents. He is Dr. Edward Sweebe, who, at the conclusion of his third year, will be taken on for a fourth year, during which his time will be devoted largely to clinical investigation and teaching.

CLINIC ACTIVITIES

The new construction necessary to the remodeling of the second and third floors has resulted in a reduction of the number of service patients admitted for surgery, but the Eye Clinic and its subdivisions continues to be as busy as ever.

Miss Oleta Allen, head nurse of the Eye Clinic, reports a total of 44,108 patient visits during the year. This represents a slight increase over last year.

In the Refraction Department 8,643 refractions were performed; approximately 800 more than in 1955-1956. In addition to the two full-time refractionists, Miss Thelma Farmer and Mr. Roland Blanchard, a visiting staff ophthalmologist is assigned to the refraction room each clinic morning. His main function is to instruct the junior residents in the techniques of refraction. Dr. Albert Sloane continues as Director of this department. The Boston Aid to the Blind has provided funds for the purchase of a trial set of contact lenses.

Adjoining the Refraction Department is the Ocular Motility Clinic, where all squint cases are studied and orthoptic treatments given to a certain number of patients. Miss Ann Stromberg reports 7,169 patient visits, approximately the same as last year.

In the Perimetry Room 1,138 visual field examinations were performed, an increase over last year. Dr. Garrett Sullivan is responsible for the training of residents in perimetry.

The Glaucoma Consultation Service saw 1,662 patients during the year, a remarkable achievement in the present cramped quarters. Dr. Robert Trotter has been assisted by Dr. Pei-Fei Lee. Each resident spends three months here and it is now the policy to rotate a younger member of the visiting staff through this clinic to improve his techniques in gonioscopy and tonography.

The Retina Service continues to be a beehive of activity. Each resident spends the final three months of his training here, where he learns diagnostic and therapeutic techniques in retinal detachment cases. A number of other ophthalmic centers send men here for special training. In addition to these special trainees, Dr. Charles Schepens also takes in, on a rotation basis, certain younger members of our visiting staff who wish to improve their knowledge of these cases. During the year 4,655 visits were made and 880 operations were performed, an increase over last year. Dr. Schepens is ably assisted by Dr. Robert Brockhurst, Dr. Ichiro Okamura and Dr. Silvio von Pirquet. Clinical research by this group will be described under the section on Retina Foundation.

FIGURES REFLECT GROWTH

The Boston Eye Bank received more than twice as many donor forms and inquiries as it had during any similar period in its eleven year history. More than 1,500 donor forms were sent in from all over New England, bringing to 7,000 the number of persons now registered with the Eye Bank. The Eye Bank also experienced its biggest year in the number of donated eyes, a total of 130 being received. The affiliation of seven new hospitals has brought to 83 the number

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of New England hospitals which now cooperate with the Eye Bank.

Since the Eye Bank is supported solely by voluntary contributions, financial assistance was gratefully received from a number of sources, chief among which were the Charles Irwin Travelli Fund, the Junior League of Boston and several anonymous donors. Thanks are also due to the Hingham Lions Club and to Mrs. James Morgan of Nahant for loyal support in many ways. Miss June Vine, who did such excellent work as Executive Secretary, resigned in August 1957 to get married. Her place has been taken by Miss Nancy Hunt. Dr. Garrett Sullivan continues as overall director.

Dr. Taylor Smith, Director of the Adolph Ehrlich Eye Pathology Laboratory, reports that 557 specimens were examined during the year. Of these, 355 were biopsies and 202 whole eyes. Conferences are held weekly, at which the resident assigned to Pathology presents interesting cases for discussion.

The Howe Library of Ophthalmology has added 152 bound volumes to its collection. The present book stock consists of 1,538 textbooks, 2,625 bound journals and society transactions and 1,826 pamphlets, making the total holdings 5,989. The librarian, Mr. Charles Snyder, reports that the attendance has increased somewhat in spite of last year's move from the center of things on the first floor to the new, more secluded quarters in the research building.

CAMPAIGN AGAINST INFECTIONS

The Bacteriological Department has expanded its activities during 1957. An earnest attempt is being made to stamp out the highly resistant bacteria which are found in this and other Boston hospitals since the widespread use of antibiotics among the general public. This campaign is being conducted by Dr. Henry Allen and Miss Anita Mangiaracine, our bacteriologist, with aid from representatives of the Ear, Nose and Throat Service.

A General Electric air sampler has been obtained, which makes it possible to track and count the number of bacteria in a measured volume of air in the operating rooms, wards and all other areas involved in the actual care of the patient. As a result of these findings, several changes have been instituted with the cooperation of the administration, nursing and house-keeping departments. The air conditioning filters in the operating rooms have been replaced by a much more efficient type, which allow practically no bacteria to come through. Once each month a bacte-

riological survey is made in the operating rooms, including all materials used in the operation.

RETROLENtal FIBROPLASIA RESEARCH

Although it has been established that the excessive use of oxygen in premature infants is a major factor in the causation of retrorenal fibroplasia, the mechanism is not entirely understood. Dr. Sidney Futterman, now working with Dr. Leona Zacharias, has designed several experiments to study the possible inactivation of certain essential retinal enzymes by excessive oxygen in the new born rat. He also plans to study methods of protection of the immature retina from oxygen damage, since it is often necessary to administer this substance to keep premature infants alive. This work is being supported by grants from the National Foundation for Eye Research and the Foundation for Vision. Dr. Zacharias, Dr. Julian Chisholm, Jr., and Dr. Richard Chapman are continuing their follow-up studies on old cases of retrorenal fibroplasia.

OPHTHALMIC PLASTICS LABORATORY

Dr. William Stone, Jr. is continuing his experiments with the plastic cornea in animals. He has demonstrated that these can be retained in the rabbit for at least three years, up to the death of the animal. Experiments are now under way with monkeys. Studies are continuing on the acceleration and inhibition of epithelial cell growth at the edge of partially exposed plastic material in orbital sockets. Other activities include the use of alloplastic materials in glaucoma drainage, and prosthetic development and service to patients. Over one hundred twenty-five prostheses were made for patients during the year.

HOWE LABORATORY OF OPHTHALMOLOGY

Glaucoma research, which has played such a conspicuous role in the researches of the Howe Laboratory for the past several years, was directed this past year chiefly toward a study of the fine details of the trabecular meshwork. It was established that this meshwork is responsible for the control of normal intraocular pressure and abnormalities of this meshwork are probably responsible for the rise in pressure with glaucoma. Microdissection of this meshwork, which has been found effective in increasing the facility of outflow in enucleated eyes, is now being tried out, with the help of Dr. Paul A. Chandler, in the surgical treatment of some clinical cases of glaucoma.

Also of interest, in connection with intraocular fluid dynamics, was the study by Dr. Maurice Langham of a homeostatic mechanism indicating that a rise in the intraocular pressure resulted in compensatory decrease in formation of aqueous humor. This depended on the integrity of the cervical sympathetic

system (in the cat) but was not affected by ligation of the carotid artery.

The lipid studies, which were originally undertaken to elucidate the deposition of fat in the cornea, appear to have a direct bearing on atherosclerosis. Thus, experiments of the past year were aimed at analyzing the role of the oleate factor, which was found of crucial significance for corneal lipogenesis, in experimental atherosclerosis of rabbits and of atherosclerosis in man.

The eminent success of the Donaldson stereocamera for photographing the anterior segment of the eye has prompted the development of a stereocamera for retinal photography. The first run of photographs indicates that this new camera will yield results far superior to those previously obtainable.

Many studies can be mentioned only in passing in this brief report but a more detailed description may be obtained in the annual report of the Howe Laboratory. These studies include electrophoretic studies of lens protein, distribution of sulphydryl compounds in the lens, toxicologic effects of certain dyes on the cornea, construction of an indirect ophthalmoscope that does not invert the image, sundry problems related to neuro-ophthalmology, objective measurement of visual acuity and the effect of ultra high frequency radio waves on the eye. Also of note are the service functions of the Howe Laboratory which has acted in a collaborative capacity with such other departments as the Glaucoma Consultation Service, the Eye Pathology Department, the Howe Library and the Department of Ophthalmology of the Harvard Medical School.

RETINA FOUNDATION

The activities of these laboratories have increased considerably. Those are set forth in more detail in the annual report of the Foundation, but, in brief, the emphasis of their program has been the study of connective tissue in general and certain connective tissues of the eye, such as the vitreous, the cornea and the uvea. Investigations were conducted into the

biosynthesis of hyaluronic acid, which is such an important component of connective tissue in the eye and elsewhere. Other important components are the mucopolysaccharides. The sites of formation of these substances and their quantitative determination were explored.

Studies were continued on various fine structures of the eye by electronmicroscopy.

Radiation damage to certain connective tissue elements were investigated with special reference to the effect of irradiation on vitamin C metabolism, the mucopolysaccharides and the carbohydrates.

Intraocular immuno-chemical reactions have been studied to gain a better understanding of the role of hypersensitivity reactions in human eye disease.

In addition to many basic studies, there has been considerable clinical research, which has been carried out for the most part at the Retina Service of the Infirmary. Laboratory space was made available in the new research building of the Infirmary and funds for its equipment were donated by the Boston Aid to the Blind. Dr. Ernst Wolf is studying the light sensitivity of the normal and abnormal retina. Dr. Benjamin Ziv has received a fellowship, made possible by the Massachusetts Lions Clubs, to investigate electrical responses in the human retina by electroretinography.

Other clinical studies have to do with the improvement of the scleral buckling procedure in retinal detachment and the diagnosis of uveitis, occurring in the extreme fundus periphery and in the angle of the anterior chamber, by indirect ophthalmoscopy with scleral depression and gonioscopy.

In addition to the Foundation's Fellowship Program, which enables certain young ophthalmologists to study here for a year, Dr. Schepens, Dr. Brockhurst, Dr. Okamura, Dr. Balazs and Dr. Wolf have participated in teaching in the postgraduate course given by the Department of Ophthalmology, Harvard Medical School.

EDWIN B. DUNPHY, M.D.
Chief of Ophthalmology

Department of Otology and Laryngology

It is well recognized by all medical educators and by all hospital administrators that the function of a teaching hospital is the care of the sick, the teaching of medical students, of nurses, of interns and residents, and research into the cause of disease. During the past year these three functions have operated efficiently, smoothly and better than ever in the Department of Otolaryngology.

CARE OF THE SICK

The care of the sick is not solely the function of the physician but is also the responsibility of everyone that comes in contact with the patient. It starts with the information desk in our rotunda, continues in our Admitting Office, with the elevator operators, the volunteers, the x-ray technicians, with the nurses, the orderlies, the aides, and with the social service workers.

Pleasant surroundings are a great psychological factor in the comfort of the patient. The remodelling of the first floor and the conversion of the second floor into four-bed rooms has done wonders for the morale of the patients. We are eagerly awaiting the completion of the third floor.

The appointment of Dr. George F. Reed, Dr. William W. Montgomery and Dr. Robert E. Klotz as Assistants to the Chief gives us better supervision of the work in the Clinics and the care of patients in the hospital as well as better supervision of resident training.

TRAINING OF RESIDENTS

A great shortage of well-trained otolaryngologists is now making itself felt in all portions of our country. The shortage has received national recognition by the United States Public Health Service and recent laws have as their object the correction of the situation. These laws provide that "the Surgeon-General in Public Health Service, upon recommendation of the National Advisory Neurological Disease and Blindness Council, may make grants of funds to public and private non-profit institutions providing graduate training of prospective clinical researchers and teachers in the fields of neurology, ophthalmology and otolaryngology. The purpose of such training grants is to assist schools in increasing the number of specialists available for academic and clinical research careers in the fields of interest to the National Institute of Neurological Diseases and Blindness and to aid the schools in developing and improving their training programs in the departments concerned."

The Department of Otolaryngology has been the beneficiary of this act. Dr. Louis Griffey, completing his fourth year of training, and two of our more recent residents who were carefully selected, are on this training grant program.

RESEARCH, NEW AND CONTINUING

The completion of the research floors in the connecting building provided additional facilities for research although we are still very cramped for space. The service laboratories: the Mosher Laboratory of Ear, Nose and Throat Pathology, the so-called Chemical Laboratory, the Hematology Laboratory, the Bacteriology Laboratory and the Library occupy space on these floors, and as the Department of Otolaryngology directs and sponsors most of their activities, they are considered as under this department in any room-available discussion.

In last year's report I spoke of the liaison formed with the Massachusetts Institute of Technology for the scientific investigation of basic auditory physiology. Since suitable quarters were not available for this basic research, it was necessary to construct a new building. This building is now nearing completion and should be ready for occupancy early in March of 1958. The building contains an experimental chamber which will be relatively free of sound and vibration. Other rooms include an office, a shop, operating room and equipment room. Under the direction of Walter A. Rosenblith, Professor of Communications Biophysics at MIT, Dr. Nelson Kiang, Mr. Robert Brown, and Mr. Edward Dunlavey will be working in this laboratory.

Dr. Kiang will conduct a series of experiments designed to learn more about hearing. These experiments will include an investigation of the auditory pathways and the auditory brain centers as well as the end organ of hearing. The members of the Microcirculatory Laboratory, under the direction of Dr. John W. Irwin, will collaborate in these experiments with certain micro-techniques which they have devised. Room 623 of the new Research Wing has been turned into a histological laboratory which will aid both the Microcirculatory Laboratory and the new Eaton Peabody Laboratory of Auditory Physiology.

Under the able direction of Dr. Robert S. Gohd, the Virus Laboratory has during the past year continued with its long-term problem of establishing methods suitable for the isolation and study of the common cold virus. In this study, for the first time, organized glands from turbinal tissue have been grown in vitro. During the October and November explosive outbreak of respiratory disease that resembled the heralded Asiatic strain of influenza, efforts were made to give the staff doctors laboratory confirmation of the clinical diagnosis of the disease. Work has been continued on the virus theory of causation of papilloma of the larynx as well as a cause of cancer. Squamous cell carcinoma as obtained from laryngectomized patients gives a perfect source of material for further study.

Under Dr. George Kelemen and Dr. Moses H.

Lurie, the Temporal Bone Laboratory has been busy. A better understanding of congenital deafness has resulted from the studies of the organ of Corti in rubella affecting the mother during the first three months of pregnancy. Similar studies have been under way on the embryological and prenatal pathology of more defined maternal disease, such as syphilis, diabetes, hemorrhagic nephritis and poliomyelitis.

A grant from the Werner Gren Foundation for Anthropology provides for research in comparative phonetics. Similar studies have, in the past, brought much light into problems of laryngeal physiology, and it is hoped that renewed studies will produce additional information along this line.

Our library of pathologic sections of the temporal bone is most complete and is quite outstanding. It affords wonderful material for the education of our residents in temporal bone pathology.

Dr. Louis Griffey has a paper ready for publication of the temporal bone changes in Paget's Disease; Dr. August Stemmer on the changes due to maternal German Measles; Dr. Raffaele N. Vallesi, a Fulbright scholar from Florence, Italy, one on temporal bone changes due to hydrocephalus, and Dr. Raul Hinojosa of Mexico City, on pseudo-parathyroidism and the hearing organ.

Under the supervision of Dr. Herman J. Sternstein, the Atrophic Rhinitis Clinic has continued work on the etiology, pathology and treatment of this disease. Research is now in progress in collaboration with Dr. Robert Griesemer of the Dermatology Department with the assistance of the Pathology Department, both of the Massachusetts General Hospital, to investigate the alterations of the epithelium of the nose as encountered in ozena, by a histochemical study of the nasal respiratory epithelium as possibly related to altered metabolic activity in the pathogenesis of the disease. It is hoped that the results of this research may uncover information as to specific histochemical variations from the normal to the abnormal, which may serve as leads for more specific direction in the study of this vexing medical problem.

Bacteriological studies are also being conducted to determine the incidence of concrete evidence to indicate that monilia are induced or constitute a therapeutic hazard with prolonged local use of antibiotic drugs.

THE SERVICE LABORATORIES

The work turned out by the Mosher Laboratory of Ear, Nose and Throat Pathology, under the direction of Dr. Werner Mueller, has been increasing steadily. No fewer than 1198 specimens were processed in 1957, including 67 total larynges, 31 radical neck dissections and 14 combined total larynx and radical neck dissections. A badly needed new paraffin oven was acquired to replace one that had been doing duty for many years and finally proved to be unreliable and beyond repair. Thanks to the Training Grant, several fine pieces of equipment were added: two

microscopes for use in the residents' training program, a Zeiss photomicrographic microscope and camera, and a Leitz camera which can be used for both low-power and photomicrography and gross photography of surgical specimens.

The Donaldson camera for making stereoscopic slides of such specimens as larynges and radical neck dissections continues to be a delight. Our collection of such slides, which never fails to excite the admiration of those seeing them for the first time, is growing at a rapid rate.

Not the least of the functions of the Mosher Pathology Laboratory is the instruction of our residents not only in histopathological diagnosis but also in the preparation of biopsies and surgical specimens for the technicians, each resident being assigned to the laboratory for three months during his first year. Our chief technician, Mrs. Virginia Jarvis, is being ably assisted by Miss Judith Norris, who is also performing secretarial duties.

Two part-time technicians were added to the staff of the Clinical Laboratory to cope with the increasing volume of work and to be on call at night, on Sundays and holidays, thus freeing the junior residents for work more in keeping with their regular duties. Our two full-time technicians, Miss Barbara DeLue and Miss Theresa Hagerty, continue to do most efficient work.

The Chemical Laboratory and Hematology Laboratory carry out the routine clinical tests on both services. They perform an exceedingly useful function in helping the physician evaluate the progress of the patient.

BACTERIAL SERVICES

Under Miss Anita Mangiaracine, the activities of the Bacteriological Department have been markedly expanded. This expansion is directly related to problems which we have in common with every hospital — prevention of postoperative infection. In late spring the hospital acquired an air sampler and with the help of this device, it is possible to track and count the number of bacteria in a measured volume of air.

Studies have been made of the bacterial contamination of the air in the operating rooms, patient areas, and all other places in the hospital directly involved in the care of patients, for example, linen closets and kitchens. Such studies have also been carried out on all materials which could possibly contribute to the contamination of the air with pathogenic organisms, especially *staphylococcus aureus*. This has included culturing all floors, pillows, mattresses, linen and blankets.

As a result of the bacteriological findings, several changes have been instituted throughout the hospital with the cooperation of the Administrative, Nursing and Housekeeping Departments. The most important change has consisted of equipping the operating rooms with the most efficient filtering devices on the market. Recent cultures taken of the air coming into these

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rooms through the new filters show almost a complete elimination of bacteria.

A new "gas" sterilizer, using ethylene oxide gas, has been put in the central supply room to be used in sterilizing items damaged by heat. No blanket is issued to a patient until it has been sterilized, the woolen blankets being sterilized in ethylene oxide gas and the cotton blankets autoclaved. A disposable plastic case, which is discarded after each patient, is being used for the pillows.

Changes have also been made in patient care as a result of these studies. Dressing procedures for service patients have been changed, dressings now being done at the bedside. All contaminated material is deposited in waxed paper bags which are incinerated. An inspection committee has been instituted to help in finding and controlling possible sources of dust, etc., which might contribute to a high bacterial count.

THE FUTURE

A vitally important area that needs reconstruction

is the Baby Room in the Ear, Nose and Throat Clinic. This section, which has not been changed in 30 years, should be modernized and in the process might yield much needed space.

The report of the committee for the United Community Services of Metropolitan Boston studying facilities for the hearing handicapped, strongly recommends that a Hearing Center be established in a medical institution. Such a center would give otological and audiological guidance as well as acting as coordinator for those agencies in Metropolitan Boston dealing with the problems of the hard of hearing. The Infirmary is the logical place for this center. The Winthrop Foundation, started in 1940, has from the first performed pioneer functions, and its activities could now be broadened to cooperate with other agencies that deal with "the mental suffering of the deaf."

LEROY A. SCHALL, M.D.
Chief of Otolaryngology

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Merola, Lorenzo O. (See COGAN, David G.)

MILAM, Daniel F., Jr., "Mikulicz's Disease of the Lacrimal Gland." A.M.A. Arch. Ophth. 57:236-240, February 1957.

Masurat, Thomas. (See KINOSHITA, Jin H.)

Okamura, Ichiro D. (See Brockhurst, Robert J.; SCHEPENS, Charles L.)

SCHEPENS, Charles L., "Research on the Vitreous Body." Modern Problems Ophth. 1:66-72, 1957.

SCHEPENS, Charles L. and Okamura, Ichiro D., "The Peripheral Retina. Anatomy and Clinical Observations." Ophth. Ibero-am. 9:280-284, 1957.

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Schepens, Charles L. (See BROCKHURST, Robert J.)

Scott, Alfred W. (See DUNPHY, Edwin B.)

SLOANE, Albert E., "Trends in Refraction." Am. Orthoptic J. 7:114-115, 1957.

Trotter, Robert R. (See LEE, Pei-Fei.)

TUCKER, Donald P., Steinberg, Arthur and Cogan, David G., "Frequency of Genetic Transmission of Sporadic Retinoblastoma." A.M.A. Arch. Ophth. 57:532-535, April 1957.

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VARGA, Laszlo and Gergely, John, "Double Refraction of Flow Studies on Hyaluronic Acid Prepared from the Vitreous Body." Biochim. et biophys. acta 23:1-6, 1957.

VERHOEFF, Frederick H., "Heterochromic Uveitis and Cataract in One Eye and Esotropic Amblyopia in Other; Latent Nystagmus; Cataract Extraction; Excellent Vision in Both Eyes." Tr. Am. Ophth. Soc. 54:157-163, 1956.

VERHOEFF, Frederick H., "Correspondence: Stereopsis and Unequal Luminosities of the Images of the Two Eyes." A.M.A. Arch. Ophth. 57:783-784, May 1957.

ZEAVIN, Bernard H. and Wald, George, "Rod and Cone Vision in Retinitis Pigmentosa." Am. J. Ophth. 42:253-269, October (pt. II), 1956.



Directory

MEMBERS OF INFIRMARY STAFF, ALUMNI AND RESIDENTS

Names of members of the Infirmary Staff are printed in capital letters.
Abbreviations following the name indicate to what service of the Infirmary the individual belongs:

Bron.; Bronchoscopy
Esoph.; Esophagoscopy

Laryn.; Otolaryngology
Oph.; Ophthalmology
Otol.; Otology

Letters in small type preceding the abbreviations indicate the special work of the individual:

a.; assistant
adm. a.; administrative assistant
an.; anesthesiologist
assoc.; associate
biochem.; biochemist
biol.; biologist
c.; chief of service

cons.; consulting
dir.; director
fel.; fellow
path.; pathologist
r.; resident
roent.; roentgenologist
s.; surgeon
s.p.o.; surgeon for plastic operations

As of March, 1958

ADAMS, SAMUEL T., Oph. 1951
1610 Pine Ave. W., Montreal, Que., Canada

ANTHONY, MARC, Oph. 1929
508 Old Nat'l Bank Bldg., Spokane, Wash.

ALBAUGH, CLARENCE H., Oph. 1940
727 W. 7th, Los Angeles, Cal.

AYASH, JOHN J., Laryn. 1946
119A Main South, Minot, N. D.

ALEXANDER, SEYMAN L., Aural 1919
170 St. George, Toronto, Ont., Canada

BAHN, GUSTAVE C., Oph. 1948
932 Maison Blanche Bldg., New Orleans, La.

ALLEN, HENRY F. (a.s. Oph.), Oph. 1949
200 Beacon, Boston, Mass.

BAIR, HUGO L., Oph. 1932
102-110 Seemd Ave., S.W. Rochester, Minn.

ALLEN, JOHN H., Aural 1904
32 Deering, Portland, Me.

BALAZS, ENDRE (biochem. & assoc. dir. Ret. Fd.)
30 Chambers, Boston, Mass.

ALLMAN, CHARLES H. (cons. s. Laryn.),
Laryn. 1930
520 Commonwealth Ave., Boston, Mass.

BALLINGER, JOHN J., Laryn. 1943
806 Park Ave., Wilmette, Ill.

ALPERT, D. ROBERT (a. Oph.)
41 Bay State Rd., Boston, Mass.

BARTON, RICHARD T., Laryn. 1945
9730 Wilshire Blvd., Beverly Hills, Cal.

ANGELINI, HUGO D. (a. Laryn.), Laryn. 1951
3 Seaward Rd., Wellesley Hills, Mass.

BASSEN, EDWARD J., Oph. 1928
70 E. 66th, N. Y. C.

ANTHONY, ALAN R., Oph. 1936
736 Granville, Vancouver, B. C., Canada

BAUER, FREDERICK, Aural 1902
BECHTEL, EDWARD J., Oph. 1957
1930 Wilshire Blvd., Los Angeles 57, Cal.

ONE HUNDRED AND THIRTY-FIRST ANNUAL REPORT

BECK, PETER (a. Oph.), Oph. 1954
43 Austin, Portsmouth, N. H.

BEETHAM, WILLIAM P. (s. Oph.), Oph. 1929
108 Bay State Rd., Boston, Mass.

BIRDSELL, CLARENCE H., Aural 1916, Oph. 1918
26 Summer, Haverhill, Mass.

BLACK, DANIEL E., Laryn. 1944
174 Main, Nashua, N. H.

BOBBETT, GORDON H., Laryn. 1948
161 W. Cheeves, Florence, S. C.

BOGAN, FREDERICK L. (cons. s. Laryn.),
Aural 1908
112 Stratford Rd., Boston, Mass.

BOIES, LAWRENCE R., Laryn. 1931
University Hosp., Minneapolis, Minn.

BORUCHOFF, S. ARTHUR (a. Oph.)
192 Bay State Rd., Boston, Mass.

BRACONIER, HARRY E. (a. s. Oph.), Oph. 1945
1180 Beacon, Brookline, Mass.

BRADY, FRANK W., Laryn. 1942
8 Merrimac, Lowell, Mass.

BRANCO, ADOLFO (r. Laryn.)

BRAWNER, LEON E., Laryn. 1925

BREED, FREDERIC B. (a. Oph.), Oph. 1950
2 Winter, Salem, Mass.

BREWER, DAVID W., Laryn. 1948
1100 E. Genesee, Syracuse, N. Y.

BROCKHURST, ROBERT J. (a. Oph.), Oph. 1951
99 W. Cedar, Boston, Mass.

BROWN, JESSE F. (c. an.)
243 Charles, Boston, Mass.

BROWN, LESTER A., JR., Laryn. 1937
478 Peachtree, Atlanta, Ga.

BROWN, ROBERT M. (res. a. Otol.)

BRYAN, BURTON D., Laryn. 1943
151 Rock, Fall River, Mass.

BULLINGTON, S. JAMES (a. Oph.), Oph. 1956
1180 Beacon, Brookline, Mass.
143 Great Rd., Bedford, Mass.

BURKE, J. ROBERT, Oph. 1918, Aural 1919, Retired
465 Eighth Ave., N.E., St. Petersburg, Fla.

CAMERON, WALTER C., Oph. 1930
1103 Medical Arts Bldg., Tacoma, Wash.

CANDRAY, CARLOS H., Oph. 1944
San Salvador, El Salvador, C. A.

CARON, ARMAND L., Laryn. 1927
Medical Arts Bldg., Worcester, Mass.

CARROLL, FRANK D., Oph. 1935
635 W. 165th, N. Y. C.

CARROLL, WALTER J. E. (s. Laryn.)
5 Chestnut, Arlington, Mass.

CARTER, LELAND E., Oph. 1926
613-617 David Whitney Bldg., Detroit, Mich.

CASE, PAUL H., Oph. 1938
550 W. Thomas Rd., Phoenix, Ariz.

CASTELLANOS, CARLOS (r. Laryn.)

CASTEN, VIRGIL G. (s. Oph.), Oph. 1931
412 Beacon, Boston, Mass.
1038 Centre, Newton Centre, Mass.

CAVANAUGH, THOMAS (a. s. Oph.), Oph. 1940
403 Commonwealth Ave., Boston, Mass.

CERRATO, CALVIN M., Laryn. 1944
422 N. Dixie, Lake Worth, Fla.

CHAMBERLAIN, CALVIN B., Oph. 1944
342 Investment Bldg., Pomona, Cal.

CHANDLER, PAUL A. (cons. s. Oph. & assoc. dir.)
Oph. r. training), Oph. 1925
5 Bay State Rd., Boston, Mass.

CHAPMAN, RICHARD B. (a. Oph.), Oph. 1955
743 High, Dedham, Mass.
35 Greenleaf, Quincy, Mass.

CHISHOLM, JULIAN F., JR. (a. s. Oph.)
34½ Beacon, Boston, Mass.
9 Central, Lowell, Mass.

CICCARELLI, EUGENE (fel. Oph.)

CLARKE, SAMUEL T., Oph. 1939
505 Medico-Dental Bldg., Reno, Nev.

CLOUGH, JOSEPH M. (a. s. Oph.), Laryn. 1939,
Oph. 1941
101 Bay State Rd., Boston, Mass.

CLUBB, ROBERT (r. Laryn.)

COGAN, DAVID G. (s. Oph. & dir. Howe Lab.),
Oph. 1935
243 Charles, Boston, Mass.

COGAN, JAMES R., Oph. 1944
414 N. Camden Dr., Beverly Hills, Cal.

COLLINS, CLARK S. (r. Laryn.)

CONVERSE, JOHN M., Laryn. 1938
722 Park Ave., N. Y. C.

COOPER, KEMP G., Laryn. 1940
1516 Cook, Denver, Colo.

CORDRAY, DAVID P., Laryn. 1940
350 N. Milwaukee Ave., Libertyville, Ill.

COVITZ, EDWARD E. (a. s. Oph.)
475 Commonwealth Ave., Boston, Mass.

COYLE, JOHN A., Oph. 1931
Norwich, Vt.

MASSACHUSETTS EYE AND EAR INFIRMARY

CREWSON, ARTHUR L., Laryn. 1927
132 Second, W. Cornwall, Ont., Canada

CRONIN, THOMAS P. (a. Oph.), Oph. 1950
94 Pleasant, Arlington, Mass.
520 Commonwealth Ave., Boston, Mass.

DAVIDSON, HERMAN P., Oph. 1920
30 N. Michigan Ave., Chicago, Ill.

DAY, KENNETH, Laryn. 1924
121 University Pl., Pittsburgh, Pa.

DEAN ABBOTT W., Oph. 1929
424 Oakland Ave., Council Bluffs, Iowa

De BLOIS, ELIZABETH (a. s. Laryn.)
247 Commonwealth Ave., Boston, Mass.

DIETRICH, HERBERT J., Laryn. 1951
2035 Delancy Place, Philadelphia 3, Pa.

DONAHUE, HUGH C. (assoc. s. Oph.), Oph. 1931
520 Commonwealth Ave., Boston, Mass.

DONALDSON, DAVID D. (a. Oph.), Oph. 1953
243 Charles, Boston, Mass.

DONOGHUE, WILLIAM F., Laryn. 1942, Oph. 1944
69 Chestnut, Springfield, Mass.

DOWLING, JOSEPH L., Oph. 1918
207 Waterman, Providence, R. I.

DOWLING, JOSEPH L., JR. (a. Oph.), Oph. 1957
207 Waterman, Providence, R. I.

DOYLE, SAMUEL C., Laryn. 1957
2 Ridge Rd., Hanover, N. H.

DROOKER, J. CHARLES (assoc. s. Laryn.),
Laryn. 1939
285 Commonwealth Ave., Boston, Mass.

DRURY, DANA W., Aural 1906
Sanderson Rd., Littleton, Mass.

DUCLOS, GASTON N., Laryn. 1943, Oph. 1945
1538 Sherbrooke, W. Montreal, Que., Canada

DUNLAVEY, EDWARD (res. a. Otol.)

DUNPHY, EDWIN B. (c. Oph.), Oph. 1923
243 Charles, Boston, Mass.

EASTON, MAHLON T. (s. Oph.), Oph. 1936
1180 Beacon, Brookline, Mass.

ERNLUND, CARL H. (cons. s. Laryn.), Laryn. 1927
5 Bay State Rd., Boston, Mass.

EVANS, MAURICE G. (s. Laryn.), Laryn. 1928
416 Marlborough, Boston, Mass.

EVANS, WILLIAM H., Oph. 1924
510 Dollar Bank Bldg., Youngstown, Ohio

FARRELL, JAMES I., Oph. 1932
301 Kempf Bldg., Utica, N. Y.

FINK, ROBERT J., Oph. 1955
133 Hawthorne Rd., Hopkins, Minn.

FILMER, GEORGE A., Oph. 1939
610 Metropolitan Bldg., Denver, Colo.

FISHER, STANWOOD E., Aural 1909
338 Spring, Portland, Me.

FLOYD, PAUL E., Oph. 1946
2 Middle, Farmington, Me.

FOOTE, CHARLES M., Oph. 1940
412 N. Hastings Ave., Hastings, Neb.

FRACKLETON, RALPH J., Laryn. 1933
15701 Detroit Ave., Lakewood, Ohio

FRAME, STUART M., Laryn. 1956
216 Alexander, Rochester, N. Y.

FRANKLIN, C. RAY, Oph. 1931
10 E. 90th, N. Y. C.

FRAZEE, JOHN R. (s. Laryn.), Laryn. 1925
1180 Beacon, Brookline, Mass.
743 High, Dedham, Mass.

FRED, GUSTAVE (cons. s. Laryn.), Laryn. 1925
520 Beacon, Boston, Mass.

FREEMAN, SUMNER L. (r. Laryn.)

FREESE, CARL G. (r. Oph.)

FULTZ, WILLIAM E., Oph. 1927
Glace Bay, N. S., Canada

FUTTERMAN, SIDNEY (biochem.)

GABRIELS, JOSEPH A. D., Oph. 1921
346 State, Albany, N. Y.

GALAINENA, MARIANO (fel. Oph.)

GAUDREAU, HONORE E., Oph. 1930
293 Bridge, Springfield, Mass.

GERMAIN, HARRY H., Oph. 1899
479 Commonwealth Ave., Boston, Mass.

GIFFORD, HAROLD, JR., Oph. 1934
1620 Medical Arts Bldg., Omaha, Neb.

GILBERT, JOHN J., Oph. 1917, Aural 1920
209 Angell, Providence, R. I.

GILLER, HERBERT, Oph. 1952
1575 E. Olive, Milwaukee, Wis.

GILLESPIE, ELMER H., Laryn. 1932

GINSBERG, JOSEPH, Oph. 1953
3115 Burnet Ave., Cincinnati, Ohio

GODUTI, RICHARD J., Oph. 1946
704 Congress, Portland, Me.

GOHD, ROBERT S. (res. vir.)
243 Charles, Boston, Mass.

GOLDCAMP, RICHARD R., Laryn. 1948
810 Dollar Bank Bldg., Youngstown, Ohio

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GOODALE, ROBERT L. (cons. s. Laryn.),
Laryn. 1926
330 Dartmouth, Boston, Mass.

GOODALL, EDWIN B. (a. Oph.), Oph. 1952
328 Washington, Wellesley Hills, Mass.

GOODELL, WILLIAM, Aural 1906
Halladay Ave., Suffield, Conn.

GOTLIB, BERNARD N. (r.)

GRANT, W. MORTON (a. s. Oph.)
243 Charles, Boston, Mass.

GRAY, GERALD H., Laryn. 1929
418 Thirtieth, Oakland, Cal.

GRIFFEY, LOUIS D. (r. Laryn.)

GUIMARAES, JOAO C., Laryn. 1946
Rua David Campista 67, Botafogo, Rio,
Brazil, S. A.

GUNDERSEN, TRYGVE (s. Oph.), Oph. 1930
534 Beacon, Boston, Mass.

GUTTERIDGE, MRS. RUTH, R.N. (adm. a.)
243 Charles, Boston, Mass.

HACKING, RAYMOND F., Oph. 1927
105 Waterman, Providence, R. I.

HAKIM, ARCADIUS, Laryn. 1954
U. S. Naval Dispensary, Washington, D. C.

HALEY, WARREN D. (a. Oph.), Oph. 1950
78 Church, Winchester, Mass.

HALTON, EDWARD J., Laryn. 1942
337 Appleton, Holyoke, Mass.

HAPP, LINLEY C. (a. Oph.), Laryn. 1931,
Oph. 1943
170 Waterman, Providence, R. I.
9 Cottage, Pawtucket, R. I.

HARDENBERGH, FIRMON E. (r. Oph.)

HEATH, PARKER (cons. s. Path.)
Sullivan Harbor, Me.

HEFFERNAN, DAVID A., Oph. 1904
270 Commonwealth Ave., Boston, Mass.

HEINE, LYMAN H., Laryn. 1927
204 Odd Fellows Bldg., Freemont, Neb.

HEINICKE, HORST J., Laryn. 1948
116 W. Buffalo, Ithaca, N. Y.

HENNESSEY, WILLIAM W., Aural 1908
33 Essex, Salem, Mass.

HENRY, MORRISS M. (r. Oph.)

HERM, ROBERT J. (a. Oph.), Oph. 1955
740 Main, Waltham, Mass.

HERMAN, EDWARDS W. (cons. s. Laryn.)
Lincoln, Mass.

HICKS, JULIUS N. (r. Laryn.)

HILL, FRANCIS S. (dir. M.E.&E.I.)
243 Charles, Boston, Mass.

HILL, FREDERICK T., Aural 1916
111 Main, Waterville, Me.

HILL, JOHN M. (a. Oph.)
108 Bay State Rd., Boston, Mass.

HIRSCH, LAWRENCE S. (a. Laryn.)
42 Lincoln, Framingham, Mass.

HO, ALBERT K. T., Laryn. 1949
Central Medical Bldg., Beretania & Kalakaua,
Honolulu, T. H.

HOBART, CARL, Oph. 1922
3601 A, Gravois Ave., St. Louis, Mo.

HOLLABAUGH, CHARLES F., Oph. 1932
1915 Church, Nashville, Tenn.

HOLMES, EDGAR M. (s.p.o.), Laryn. 1934
330 Dartmouth, Boston, Mass.

HOLT, LAWRENCE B., Oph. 1948
208-209 Reynolds Bldg., Winston-Salem, N. C.

HOOPLE, GORDON D., Laryn. 1926
1100 E. Genessee, Syracuse, N. Y.

HOUSTON, G. GILBERT, Laryn. 1938
10 West, Charlottetown, P.E.I., Canada

HOWARD, DONALD O., Oph. 1941
107 N. Old Manor Rd., Wichita, Kan.

HURLEY, PAUL D. (a. Oph.)
270 Commonwealth Ave., Boston, Mass.

HURST, ALFRED P. (r. Laryn.)

HUTCHINSON, RUTH M., R.N. (adm. a.)
243 Charles, Boston, Mass.

IKUI, HIROSHI (fel. Oph.)

IRELAND, PERCY E., Laryn. 1935
170 St. George, Toronto, Ont., Canada

IRGENS, EDWIN R., Laryn. 1938
11 Peoples State Bank Bldg., St. Joseph, Mich.

IRVINE, A. RAY, JR., Oph. 1947
9730 Wilshire Blvd., Beverly Hills, Cal.

IRVINE, A. RODMAN, Oph. 1935
9730 Wilshire Blvd., Beverly Hills, Cal.

IRVINE, WENDELL, Oph. 1941
2010 Wilshire Blvd., Los Angeles, Cal.

MASSACHUSETTS EYE AND EAR INFIRMARY

IRWIN, JOHN W. (dir. Micro-Circ. lab.)
243 Charles, Boston, Mass.

JACOBS, DENHOLM M. (assoc. dir. M.E.&E.I.)
243 Charles, Boston, Mass.

JAKO, GEZA (fel. Laryn.)

JAKUS, MARIE (biol.)

JESBERG, NORMAN, Laryn. 1947
Eye & Ear Hospital, 500 S. Lucas Ave.,
Los Angeles, Cal.

JEWETT, EVERETT P., Oph. 1945
65 Elm, Worcester, Mass.

JOHNSON, CARL C. (a. s. Oph.), Oph. 1942
5 Bay State Rd., Boston, Mass.
81 Concord Rd., Weston, Mass.

JOHNSON, CHARLES I. (cons. s. Laryn.),
Laryn. 1929
374 Heath, Chestnut Hill, Mass.

JOHNSON, DAVID S., Oph. 1956
Hauser Clinic, 7411 Third Ave., Detroit, Mich.

JOHNSON, LOUIS L. (r. Laryn.)

JOHNSON, LORAND V., Oph. 1937
School of Medicine, Western Reserve U.
Cleveland, Ohio

JONES, EDWARD E., Laryn. 1928
141 Elm, Brockton, Mass.

JUDD, DELBERT K., Laryn. 1934
423 Arcade Bldg., Kankakee, Ill.

KANT, ALFRED, Oph. 1948
620 Woolworth Bldg., Watertown, N. Y.

KAZANJIAN, KENNETH A. (a. s. Laryn.)
475 Commonwealth Ave., Boston, Mass.

KAZANJIAN, VARAZTAD H. (cons. s.p.o.)
475 Commonwealth Ave., Boston, Mass.

KEARNY, RICHARD A., Aural & Lar., 1921
2311 Conn. Ave., Washington, D. C.

KELEMEN, GEORGE (res. assoc.)
20 Gloucester, Boston, Mass.

KELLEY, VINCENT J. (s. Laryn.)
520 Commonwealth Ave., Boston, Mass.

KENNEALLEY, ELMER V., Oph. 1952
479 Main, Greenfield, Mass.

KENNEDY, MICHAEL F., Oph. 1927
805 Columbia Medical Bldg., Washington, D. C.

KENT, CHARLES (a. s. Laryn.)
270 Commonwealth Ave., Boston

KERN, HAROLD (biochem.)

KERST, J. ARTHUR, Oph. 1934
1211 S. 6th, Springfield, Ill.

KIANG, NELSON Y. (res. a. Otol.)

KING, DAVID G., Laryn. 1951
605 Commonwealth Ave., Boston, Mass.

KING, MERRILL J. (cons. s. Oph.), Oph. 1932
22 White, Rockland, Me.

KING, MERRILL J., JR., Oph. 1956
22 White, Rockland, Me.

KINOSHITA, JIN H. (biochem.)

KLOTZ, ROBERT E. (a. Laryn. & a. to c. Laryn.),
Laryn. 1956
243 Charles, Boston, Mass.

KOS, CLAIRE M., Laryn. 1941
University Hospital, Iowa City, Iowa

KUWABARA, TOICHIRO (assoc. Oph. path.)
243 Charles, Boston, Mass.

LANE, CHARLES S., Laryn. 1949
1214 N. B., Fort Smith, Ark.

LANGWORTHY, HENRY G., Aural 1907
394 W. 10th, Dubuque, Iowa

LAPIERRE, WARREN W., Oph. 1948
32 Clinton Ave., Norwichtown, Conn.
10 Shetucket, Norwich, Conn.

LAVOIE, ROLAND, JR., Laryn. 1950
3 Claire Fontaine, Quebec City, Que., Canada

LAWLOR, EDWARD F. (a. s. Laryn.), Laryn. 1941
67 Vernon, Waltham, Mass.

LAWLOR, ROBERT S. (r. Oph.)

LEAHEY, BRENDAN D. (s. Oph.), Oph. 1933
9 Central, Lowell, Mass.

LEAVELLE, ROBERT B., Oph. 1953
4747 Vineland Ave., N. Hollywood, Cal.

LECONTE, CHARLES M., Laryn. 1947
Rue Royale, Cap-Haitien, Haiti

LEE, PEI-FEI (fel. Oph.)

LEMOINE, ALBERT N., JR., Oph. 1945
4620 J. C. Nichols Pkwy., Kansas City, Mo.

LENTINE, JOSEPH (assoc. s. Laryn.), Laryn. 1935
15 Bay State Rd., Boston, Mass.

LEVITT, JESSE M., Oph. 1933
515 Ocean Ave., Brooklyn, N. Y.

LEWIS, DONALD K. (assoc. s. Laryn., assoc. s.
Winthrop Fd.), Laryn. 1943
243 Charles, Boston, Mass.
15 Dix, Winchester, Mass.

LIEBMAN, SUMNER D. (a. s. Oph.), Oph. 1943
115 Bay State Rd., Boston, Mass.

LILLY, JOHN S., Laryn. 1951
215 E. Columbus, Kenton, Ohio

ONE HUNDRED AND THIRTY-FIRST ANNUAL REPORT

LINCOFF, WILLIAM, Oph. 1954
302 E. 9th, Chester, Pa.

LINEBACK, MERRILL I., Laryn. 1952
28 Eighth, N.E., Atlanta, Ga.

LINGEMAN, BYRON S. (r. Oph.)

LODGE, EDMUND A., Laryn. 1924
27 Pleasant, Gloucester, Mass.

LOTHROP, OLIVER A., Aural 1911
101 Beacon, Boston, Mass.

LOUgee, JOHN L., Aural 1909
195 St. Paul, Brookline, Mass.

LOVELY, DAVID K., Laryn. 1946
73 Deering, Portland, Me.

LOVESY, BURTON E., Laryn. 1935
15 W. Central, Natick, Mass.

LURIE, MOSES H. (cons. s. Laryn.,
dir. Laryn. Res.)
483 Beacon, Boston, Mass.

LYNCH, MERCER G., Laryn. 1936
1567 Exposition Blvd., New Orleans, La.

MACDONALD, ALEXANDER E., Oph. 1923
421 Medical Arts Bldg., Toronto, Ont., Canada

MACDONALD, DONALD H., Laryn. 1930

MACHAMER, R. WENNER, Laryn. 1945
11710 Shaker, Cleveland, Ohio

MACKENZIE, ROLAND C., Oph. 1911
30 Grant, Waltham, Mass.

MACLAUGHLIN, CHARLES H. (a. s. Oph.),
Oph. 1947
834 Broadway, Everett, Mass.

MACMILLAN, ALEXANDER S. (roent.)
483 Beacon, Boston, Mass.

MACMILLAN, ALEXANDER S., JR. (a. roent.)
483 Beacon, Boston, Mass.

MACMILLAN, ANDREW L., JR., Aural 1912
46 Pleasant, Concord, N. H.

MACNIE, JOHN P., Oph. 1929
635 W. 165th, N. Y. C.

MALKOFF, JACK, Laryn. 1955
1310 Central Tower, Youngstown, Ohio

MANCALL, IRWIN T. (a. Oph.), Oph. 1952
750 Main, Hartford, Conn.

MANGIARACINE, ANITA (bact.)
243 Charles, Boston, Mass.

MANSUR, LEON WALLACE, Oph. 1898, Retired
Valley Center, Cal.

MARTIN, S. FORREST (a. s. Oph.), Oph. 1938
165 Bay State Rd., Boston, Mass.

MARTINEZ, DANIEL E. M., Laryn. 1953
Veterans Hosp., Dallas, Tex.

MATTIS, ROBERT DEAN, Oph. 1942
634 N. Grand Blvd., St. Louis, Md.

McCABE, FRANK J., Oph. 1916
204 Angell, Providence, R. I.

McCALL, ROBERT E., Laryn. 1938
236 S. Main, Marion, N. C.

McCLINTOCK, WALTER L., Laryn. 1938

MCENEANEY, JOSEPH P., Laryn. 1947
301 Essex, Lawrence, Mass.

McGUIGAN, G. EDMUND, Oph. 1924
26 W. King, York, Pa.

McINTIRE, FREDERIC J., Oph. 1910
63 N. Common, Lynn, Mass.

McKEIGUE, JOHN E. (assoc. s. Laryn.),
Laryn. 1949
274 Commonwealth Ave., Boston, Mass.
94 Pleasant Ave., Arlington, Mass.

MCKENZIE, RODNEY J., Laryn. 1942
480 Doctors' Bldg., 19 Garfield Pl.,
Cincinnati, Ohio

MCLEOD, ANGUS M., Laryn. 1942
Medical Arts Bldg., Toronto, Ont., Canada

MCLEOD, JOHN, Oph. 1930
209 Tower Bldg., 116 W. 47th, Kansas City, Mo.

McPHERSON, ALICE (fel. Oph.)

MEEK, RAYMOND E., Oph. 1926
"The North House", Stephentown, N. Y.

MELTZER, PHILIP E. (s. Laryn. & s. Winthrop
Fd.), Aural 1919
285 Commonwealth Ave., Boston, Mass.

MERTINS, PAUL S., Laryn. 1936
32 Clayton, Montgomery, Ala.

MESSENGER, HARRY K., Oph. 1934
140 Marlborough, Boston, Mass.

MEYER, MONTO F., Oph. 1919
904 Canal Bank Bldg., New Orleans, La.

MILAM, DANIEL F., Oph. 1955
916 Cobb Bldg., Seattle, Wash.

MILES, NATHAN E., Oph. 1937
1031 S. 21st, Birmingham, Ala.

MILLER, DANIEL (assoc. s. Laryn.), Laryn. 1943
403 Commonwealth Ave., Boston, Mass.

MILLS, LLOYD, JR., Oph. 1947
609 S. Grand Ave., Los Angeles, Cal.

MASSACHUSETTS EYE AND EAR INFIRMARY

MONTGOMERY, WILLIAM W. (a. Laryn. & a. to c. Laryn.), Laryn. 1955
243 Charles, Boston, Mass.

MOORE, DONALD E., Oph. 1937
417 Medical Arts Bldg., Syracuse, N. Y.

MOORE, EDWARD E., Oph. 1944
706 Flatiron Bldg., Asheville, N. C.

MOORE, JAMES A., Laryn. 1940
525 E. 68th, N. Y. C.

MOORMAN, JOHN D., Oph. 1939
P. O. Box 536, Huntsville, Ala.

MORGAN, ANN S. (a. r. Oph. path.)

MORRISSEY, ARTHUR M. (a. Oph.)
24 Rural Ave., Medford, Mass.

MOSHER, HENRY A. (a. s. Oph.), Oph. 1941
266 Beacon, Boston, Mass.

MOTELEY, FREDERICK E., Laryn. 1925
Charlotte Eye & Ear Hospital, Charlotte, N. C.

MOULTON, EVERETT C., Jr., Oph. 1948
1214 N. B., Fort Smith, Ark.

MUELLER, WERNER (dir. Laryn. path. & Mosher Lab.), Laryn. 1933
243 Charles, Boston, Mass.

MURPHY, WILLIAM E., Laryn. 1933
Slater Bldg., Worcester, Mass.

MYERS, ROSCOE W., Oph. 1927
36 Pleasant, Worcester, Mass.

MYERS, STANLEY A., Laryn. 1937
2218 Market, Youngstown, Ohio

MYSEL, PHILIP (cons. s. Laryn.)
79 Bay State Rd., Boston, Mass.

NACHLAS, N. EDWARD, Laryn. 1951
Latrobe Bldg., Charles & Read, Baltimore, Md.

NAVAS, LUIS, Laryn. 1950
Apartado N. 376, Managua, Nicaragua, C. A.

NICHOLSON, HARRY M., Aural 1913
515 Medical Arts Bldg., Hamilton, Ont., Canada

O'CONNELL, JOHN D., Oph. 1943
50 Farmington Ave., Hartford, Conn.

O'CONNOR, MICHAEL JOHN, Aural & Lar. 1923
105 Waterman, Providence, R. I.

OFFENBACH, BERTHA (a. Oph.)
51 Homer, Newton Centre, Mass.

OGDEN, FREDERIC W., Laryn. 1942
Cravens Bldg., Fayetteville, Ark.

OKAMURA, ICHIRO D. (a. Oph.), Oph. 1952
99 W. Cedar, Boston, Mass.

OLDS, BOMAR A., Laryn. 1929
124 W. Princeton Ave., College Park, Ga.

OLIVE, GEORGE M. (r. Oph.)

OLSEN, HENRIETTA I., R.N. (adm. a.)
243 Charles, Boston, Mass.

PARKER, HARRY C., Oph. 1902

PATTERSON, WILLIAM J., Laryn. 1956
925 W. Georgia, Vancouver 1, B. C.

PAVLO, IRVING (a. Oph.)
520 Beacon, Boston, Mass.

PERRETER, FRANK A., Oph. 1957
208 Reynolds Bldg., Winston-Salem, N. C.

PERONE, PIERO, Laryn. 1955
516 E. 79th, N. Y. C.

PFISTER, RAYMOND L., Laryn. 1952
1298 Herschel Ave., Cincinnati, Ohio

PIPPITT, RICHARD B. (a. s. Oph.), Oph. 1949
328 Washington, Wellesley Hills, Mass.

POIRIER, GEORGE H. (cons. s. Laryn.)
60 Bay State Rd., Boston, Mass.

POLLEN, ABRAHAM (a. s. Oph.), Oph. 1944
636 Beacon, Boston, Mass.

POLLOCK, FREDERIC J., Laryn. 1935

POPPEN, MAYO J., Oph. 1948
6356½ Van Nuys Blvd., Van Nuys, Cal.

POSNER, MARVIN, Oph. 1952
371 State, Albany, N. Y.

PRICE, R. RAYMOND, Oph. 1936
118 Rutledge Ave., Charleston, S. C.

PROVOST, ADOLPHE J., Laryn. 1927
1458 Elm, Manchester, N. H.

PRUDHON, CHARLES A., Laryn. 1927
168 Sterling, Watertown, N. Y.

QUEVEDO, A. ARTURO, Oph. 1933
4a Ave., Sur 19, Guatemala City, Guatemala, C. A.

QUEVEDO, JULIO, Laryn. 1941
15 Calle 6 - 59, Guatemala City, Guatemala, C. A.

RAGAN, JOHN D., Oph. 1954
736 Granville, Vancouver 2, B. C.

RAMBO, J. H. TOM, Laryn. 1948
535 Park Ave., N. Y. C.

RAPPAPORT, MAURICE B. (res. assoc. Otol.)

RAYNES, ALPHONSE F., Oph. 1923
16 Market Sq., Portsmouth, N. H.

REAGAN, DANIEL J., Oph. 1943, Laryn. 1944
507 Main, Worcester, Mass.

REED, GEORGE F. (a. s. Laryn. & a. to c. Laryn.), Laryn. 1952
243 Charles, Boston, Mass.

REGAN, CHARLES D. J. (a. Oph.), Oph. 1953
99 W. Cedar, Boston, Mass.

ONE HUNDRED AND THIRTY-FIRST ANNUAL REPORT

RICE, EARLE W., Laryn. 1953
390 Main, Worcester, Mass.

RICE, THEODORE A., Oph. 1942
390 Main, Worcester, Mass.

RICHARDS, LYMAN G. (cons. s. Laryn.),
Laryn. 1924
Medical Dept., M.I.T., Cambridge, Mass.

RICHARDSON, JOHN R. (s. Laryn., s. Bron. &
Esoph.), Laryn. 1935
403 Commonwealth Ave., Boston, Mass.

RIEMER, KARL (a. s. Oph.), Oph. 1943
403 Commonwealth Ave., Boston, Mass.

RIFE, CHARLES J. (r. Oph.)

RING, HENRY G. (r. Oph.)

ROBINSON, MENDELL (a. Laryn.), Laryn. 1957
206 Waterman, Providence, R. I.

ROGERS, WILLIAM P., JR. (a. s. Laryn.)
275 Charles, Boston, Mass.

ROOPENIAN, ARAM (a.s.p.o.), Laryn. 1944
475 Commonwealth Ave., Boston, Mass.

ROSENBLITH, WALTER A. (res. assoc. Otol.)

Ross, PERCY J., Laryn. 1935
1045 Michigan Ave., Chicago, Ill.

ROTHWELL, STEPHEN C., Laryn. 1925
Nonquitt, Mass.

RUBEN, MAURICE (a. s. Laryn.)
151 Maple, Springfield, Mass.

RUGGLES, RALPH H. (cons. s. Oph.), Oph. 1920
394 Marlborough, Boston, Mass.

RUNGE, PAUL M. (a. Oph.)
140 Marlborough, Boston, Mass.
47 W. Elm, Brockton, Mass.

RUTNIN, UTHAI (fel. Oph.)

SACHS, BARUCH (a. Oph.), Oph. 1957
636 Beacon, Boston, Mass.

SACHS, BENJAMIN (cons. s. Oph.), Oph. 1925
636 Beacon, Boston, Mass.

SADE, JACOB, Laryn. 1958
c/o Theodore E. Walsh, M.D.
640 Kings Highway, St. Louis, Mo.

SAINSBURY, AUGUSTUS W., Laryn. 1943
42 N. Main, Canadaigua, N. Y.

SAEED, YUNIS M., Laryn. 1954
1432 Floribunda Ave., Burlingame, Cal.

SAM, JAMES M., Laryn. 1949
Jones Eye, Ear, Nose & Throat Hospital,
Johnson City, Tenn.

SARGENT, FRANCIS B., Aural & Lar., 1923
124 Waterman, Providence, R. I.

SAVAGE, ROSS E., Oph. 1910
Gloucester, Mass.

SCARNEY, HERMAN D., Oph. 1928
573 Fisher Bldg., Detroit, Mich.

SCHALL, LEROY A. (c. Laryn.)
243 Charles, Boston, Mass.

SCHEPENS, CHARLES L. (a. s. Oph. & dir.
Ret. Fd.)
99 W. Cedar, Boston, Mass.

SCHNEBLY, J. THOMAS, Oph. 1936
11134 Georgia Ave., Silver Spring, Md.

SCOTT, ALFRED W. (a. Oph.), Oph. 1955
7 Bay State Rd., Boston, Mass.

SCOTT, DAVID H. (a. s. Oph.), Oph. 1949
7 Thorndike, Beverly, Mass.

SEALE, EARL S. (a. s. Oph.), Oph. 1940
126 Bay State Rd., Boston, Mass.

SEBESTYEN, JOHN (fel. Oph.)

SHAMBAUGH, GEORGE E., JR., Laryn. 1932
55 E. Washington, Chicago, Ill.

SHEA, JOHN J., Laryn. 1953
3259 Overland Pl., Memphis, Tenn.

SHEA, MICHAEL (fel. Oph.)

SHEEHAN, LINUS A., Oph. 1943
210 Angell, Providence, R. I.

SHERMAN, MORRIS, Laryn. 1950
82 W. Commerce, Bridgeton, N. J.

SHLOSSBERG, FRANK R. (a. s. Laryn.)
116 Emerson, Haverhill, Mass.

SKILLING, FRANCIS C., Oph. 1933
442 Ingram Bldg., Miami, Fla.

SLAUGHTER, EARL C., Laryn. 1940
1265 Fifth, Norfolk, Neb.

SLOANE, ALBERT E. (assoc. s. Oph.)
416 Marlborough, Boston, Mass.

SMITH, HAROLD, Laryn. 1937
1149 N. Garvey Ave., Pomona, Cal.

SMITH, TAYLOR R. (a. s. Oph. & dir. Oph. path.),
Oph. 1951.
243 Charles, Boston, Mass.

SMITH, WILLIAM L., Oph. 1950
U. S. Naval Hosp., Philadelphia, Pa.

SNOW, JAMES B. (r. Laryn.)

SNOW, JOHN C. (a. an.)
243 Charles, Boston, Mass.

Snow, ROBERT C., Laryn. 1940
508 E. S. Temple, Salt Lake City, Utah

SPINOLA, EDMUND T. L., Laryn. 1954
Rua Da Graca 19, Bahia, Brazil, S. A.

MASSACHUSETTS EYE AND EAR INFIRMARY

SPRATT, CHARLES N., Oph. 1904
1231 Medical Arts Bldg., Minneapolis, Minn.

STAPFF, VOLKER H., Laryn. 1952
Agraciada 1640, Montevideo, Uruguay, S. A.

STEMMER, AUGUST (r. Laryn.)

STEPHENS, H. FREDERICK, Oph. 1939
195 Thayer, Providence, R. I.

STERNSTEIN, HERMAN J. (assoc. s. Laryn.)
54 Winter, Norwood, Mass.

STONE, WILLIAM, JR. (a. s. Oph.), Oph. 1949
243 Charles, Boston, Mass.
1101 Beacon, Brookline, Mass.

STONECYPHER, DAVID (r. Oph.)

STRAITIFF, RUTH (adm. a.)
243 Charles, Boston, Mass.

STRATFORD, THOMAS (fel. Oph.)

SUDARSKY, RAYMOND D., Oph. 1956
76 Canterbury, Hartford, Conn.

SULLIVAN, GARRETT L. (assoc. s. Oph.),
Oph. 1938
101 Bay State Rd., Boston, Mass.

SULLIVAN, JOHN J. (a. Oph.)
9 Central, Lowell, Mass.

SWARTZ, MORRIS (a. Laryn.)
18 Broad, Lynn, Mass.

SWEEBE, EDWARD C. (r. Oph.)

TAYLOR, IRVIN S. (r. Oph.)

TEGELBERG, JULIUS, Laryn. 1931
390 Main, Worcester, Mass.

THOMAS, JOHN H., Laryn. 1944, Oph. 1946
1621 E. Market, Warren, Ohio

THORLAKSON, NEIL F., Oph. 1956
916 Cobb Bldg., Seattle, Wash.

TOOT, J. FREDERICK, Oph. 1922
520 First Nat'l Bank Bldg., Canton, Ohio

TROTTER, ROBERT R. (a. Oph. & a. to c. Oph.),
Oph. 1951
243 Charles, Boston, Mass.

TUCKER, DONALD P. (r. Oph.)

TWITCHELL, MARSHALL C., Oph. 1941
217 S. Union, Burlington, Vt.

VAIL, DERRICK T., Oph. 1924
700 N. Michigan Ave., Chicago, Ill.

VALLESI, RAFFAELE N. (fel. Laryn.)

VERHOEFF, FREDERICK H. (cons. s. Oph.)
395 Commonwealth Ave., Boston, Mass.

VIGER, ROLAND J., Oph. 1937
Medical Bldg., 710 Drummond, Montreal, Que.,
Canada

von PIRQUET, SILVIO (fel. Oph.)

WALKER, D. HAROLD (cons. s. Laryn.), Aural
1902
Peterborough, N. H.

WATTLES, F. MERRILL, Laryn. 1938
1200 S. Kuhl Ave., Orlando, Fla.

WEBSTER, FRANKLIN R., Oph. 1926
810 State Tower Bldg., Syracuse, N. Y.

WEILLE, FRANCIS L. (s. Laryn.), Laryn. 1929
247 Commonwealth Ave., Boston, Mass.

WEISER, ALBERT (a. Laryn.)
390 Pine, Fall River, Mass.

WEISMAN, HERMAN J., Laryn. 1944
509 W. Willow, Visalia, Cal.

WELSH, ROBERT BOND (fel. Oph.)

WEST, FRANCIS J. (a. s. Oph.), Oph. 1947
195 Ashmont, Dorchester, Mass.

WHITE, LEON E. (cons. s. Laryn.), Aural & Lar.
1923
91 Pearl, Framingham, Mass.

WHITNEY, RAYMOND C., Oph. 1922
227 Union, New Bedford, Mass.

WILKER, SIDNEY R. (a. Laryn.)
285 Commonwealth Ave., Boston, Mass.

WILKINS, SAMUEL H. (cons. s. Oph.)
270 Commonwealth Ave., Boston, Mass.

WILLIS, HARRY C., Aural & Lar. 1923
Willis Bldg., Wilson, N. C.

WINKLER, HERMAN A., Laryn. 1926
224 Thayer, Providence, R. I.

WISHART, DAVID E. S., Aural & Lar. 1922
170 St. George, Toronto, Ont., Canada

WOODARD, M. WAYNE, Oph. 1950
517-519 Flat Iron Bldg., Asheville, N. C.

WOODWARD, ARTHUR (r. Laryn.)

WRIGHT, CLARENCE F., Laryn. 1931
Weston, Ont., Canada

WRIGHT, EDWARD N., Laryn. 1933
106 Med. Arts Bldg., Port Arthur, Ont., Canada

ZACHARIAS, LEONA (biol.)
243 Charles, Boston, Mass.

ZANEK, OTTO L., Oph. 1946
1610 Medical Towers, Houston, Tex.

ZAVALIA, JULIO U. (r. Laryn.)

ZEAVIN, BERNARD, Oph. 1954
312 S. Washington, Alexandria, Va.

ZONDERMAN, BERNARD (assoc. s. Laryn.),
Laryn. 1946
285 Commonwealth Ave., Boston, Mass.

ZOVICKIAN, ANTHONY (a. s. Laryn.)
270 Commonwealth Ave., Boston, Mass.

In Memoriam

JOSEPH L. GOODALE, M.D.

Consulting Surgeon in Otolaryngology

January 22, 1868 — November 5, 1957

1926 — Consulting Aural Surgeon

1930 — Associate in Laryngological Teaching

FREDERICK J. McINTIRE, JR., M.D.

Assistant in Otolaryngology

November 22, 1914 — June 18, 1957

1952 — Assistant in Otolaryngology

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Massachusetts Eye and Ear Infirmary

ONE HUNDRED and THIRTY-SECOND ANNUAL REPORT

REPORTS FOR 1958

STAFF AND OFFICERS FOR 1959



BOSTON 14, MASSACHUSETTS

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Massachusetts
Eye and Ear Infirmary

ONE HUNDRED and THIRTY-SECOND
ANNUAL REPORT

REPORTS FOR 1958

STAFF AND OFFICERS FOR 1959



243 CHARLES STREET
Telephone: LAfayette 3-7900

BOSTON 14, MASSACHUSETTS

MASSACHUSETTS EYE AND EAR INFIRMARY

INCORPORATED IN 1827

THE MASSACHUSETTS EYE AND EAR INFIRMARY and its Clinics serve men, women, and children from all over New England and beyond who need expert care for diseases and injuries of the eye, ear, nose, and throat. Established in 1824, the Infirmary is one of the two oldest hospitals in the country specializing in the preservation of good eyesight and sound hearing.

The Infirmary is a voluntary hospital — an independent, non-profit, private institution. The Board of Managers is non-paid and the Staff of specialists gives its services without charge to patients in the clinics and to those patients who come into the hospital "on service." The hospital receives no support from city or state but is financed by receipts from patients, by voluntary gifts and bequests, and by our allotment from the United Community Services as a "Red Feather Service." However, the Infirmary's allotment from the United Community Services is not sufficient to cover the amount the hospital gives in "free service" to patients from the Greater Boston area who cannot pay for their own care.

In many ways the Infirmary and the Massachusetts General Hospital, its neighbor, cooperate to give complete medical service to patients. The Clinics of both hospitals share a common Admitting Office with its entrance on Fruit Street. Also, for maximum efficiency and economy, the two hospitals unite in such matters as maintenance and personnel management.

The Clinics and service beds at the Infirmary are open to those who are not able to pay doctors' fees, since the Staff gives its services without charge to such patients. All patients in the Clinics and in the hospital are under the medical and surgical care of doctors on the hospital staff who are specialists in Ophthalmology and Otolaryngology.

Whenever the patient is already under the care of a doctor, arrangements for his admission to the

Infirmary should be made by his own doctor, or the patient should bring a letter from his doctor recommending admission to the hospital. However, any patient who is not under a doctor's care and who is not able to pay for private care, is eligible for treatment in the Clinics and service accommodations. In cases of emergency, of course, a patient is admitted immediately at any time of the day or night.

The Clinics, located on Fruit Street, are open daily except Sunday and legal holidays* for a fee of \$3.00† per clinic visit. After a preliminary interview, patients are examined by the clinic doctor and treatment is prescribed. If further treatment is necessary, the clinic patient is given an appointment for his next visit, as all but the first visit are by appointment only.

Patients are admitted to the service accommodations by direct appointment with the Admitting Office, 243 Charles Street, from 9 to 10 A.M. daily except Sunday and legal holidays. Arrangement for admission to private and semi-private accommodations is made by the Staff doctor in charge of the patient, who then comes on the appointed day to the Infirmary Admitting Office.

Daily rates† for board and room for service patients are \$21.00. For private and semi-private patients, five and six bed rooms are \$23.00 per day, four bed rooms are \$24.00 and two bed rooms are \$26.00 and \$27.00, single room with lavatory, \$28.00 per day, and single room with bath from \$30.00 to \$36.00 per day. These rates include general nursing, ordinary medicine. Additional charges are made for operating room, X-Ray, laboratory tests, special nursing.

Blue Cross (Associated Hospital Service) plans are accepted at the Infirmary, the benefits being allowed as soon as approval has been received. All other non-profit insurance is handled by the patient for himself, and he pays the regular rates to the hospital.

* Ear, Nose and Throat Clinic not open Saturdays in July and August.

† As of March 1, 1959.

ONE HUNDRED AND THIRTY-SECOND ANNUAL REPORT

Board of Managers

1959

<i>President</i>	.	.	.	Henry Hixon Meyer, 53 State Street, Boston	.	.	.	.	.	1937
<i>Secretary</i>	.	.	.	Honorable Edmund V. Keville, 10 Pemberton Sq., Boston	.	.	.	.	1942-43, 1945	
<i>Treasurer</i>	.	.	.	Horace W. Frost, 74 State Street, Boston	.	.	.	.	.	1940
Melville Chapin	.	.	.	84 State Street, Boston	.	.	.	.	.	1956
William H. Claflin, III	.	.	.	74 State Street, Boston	.	.	.	.	.	1947
Mrs. Richard Cary Curtis	.	.	.	Manchester	.	.	.	.	.	1940
Mrs. John W. Farley	.	.	.	898 South Street, Needham	.	.	.	.	.	1957
Mrs. Foster Furcolo*	.	.	.	71 Monadnock Road, Chestnut Hill	.	.	.	.	.	1959
Robert H. Hopkins	.	.	.	82 Devonshire Street, Boston	.	.	.	.	.	1951
William A. Parker	.	.	.	200 Berkeley Street, Boston	.	.	.	.	.	1935
Mrs. Sullivan A. Sargent	.	.	.	701 South Street, Needham	.	.	.	.	.	1945
LeRoy A. Schall, M.D.*	.	.	.	66 Beacon Street, Boston	.	.	.	.	.	1959
Walter H. Trumbull	.	.	.	185 Meadow Brook Road, Weston	.	.	.	.	.	1929
Frederic Winthrop	.	.	.	Groton House, Ipswich	.	.	.	.	.	1943

* appointed by the Commonwealth

Corporation

(in addition to Managers)

William S. Ballard	.	.	.	.	.	.	45 Milk Street, Boston
Robert F. Bradford	.	.	.	.	.	.	53 State Street, Boston
Richard P. Chapman	.	.	.	.	.	.	28 State Street, Boston
William Ehrlich	.	.	.	.	.	.	120 Kingston Street, Boston
Nathaniel Faxon, M.D.	.	.	.	.	.	.	West Falmouth
Richard Harte, Sr.	.	.	.	.	.	.	Ames Company, North Easton
Francis W. Hatch, Jr.	.	.	.	.	.	.	N. E. Mutual, 501 Boylston St., Boston
Thomas H. Hoare	.	.	.	.	.	.	6 Beacon Street, Boston
Weston Howland, Jr.	.	.	.	.	.	.	75 Federal Street, Boston
Mrs. Francis T. Hunter	.	.	.	.	.	.	56 Lawrence Road, Chestnut Hill
Mrs. Varaztad H. Kazanjian	.	.	.	.	.	.	191 Clifton Street, Belmont
William F. Keesler, Jr.	.	.	.	.	.	.	342 Beacon Street, Boston
Arthur T. Lyman	.	.	.	.	.	.	37 Thatcher Street, Westwood
George A. McLaughlin	.	.	.	.	.	.	11 Pemberton Square, Boston
Rev. Robert G. Metters	.	.	.	.	.	.	St. George's School, Route 5, Spokane, Wash.
August R. Meyer	.	.	.	.	.	.	53 State Street, Boston
Miss Amelia Peabody	.	.	.	.	.	.	120 Commonwealth Avenue, Boston
George L. Pew	.	.	.	.	.	.	17 Storer Street, Portland, Maine
Henry K. Porter	.	.	.	.	.	.	74 Foley Street, Somerville
Huston Rawls	.	.	.	.	.	.	84 State Street, Boston
Honorable Leverett Saltonstall	.	.	.	.	.	.	82 Devonshire Street, Boston
William L. Saltonstall	.	.	.	.	.	.	82 Devonshire Street, Boston
Arthur L. Sherin	.	.	.	.	.	.	80 Federal Street, Boston
Leslie Soule	.	.	.	.	.	.	Strawberry Hill Street, Needham
Frederick H. Verhoeff, M.D.	.	.	.	.	.	.	395 Commonwealth Avenue, Boston
D. Harold Walker, M.D.	.	.	.	.	.	.	"Tree Tops," Peterborough, N. H.
Howland S. Warren	.	.	.	.	.	.	1 Federal Street, Boston

MASSACHUSETTS EYE AND EAR INFIRMARY

Committees

EXECUTIVE COMMITTEE

Henry Hixon Meyer, *Chr.*
Horace W. Frost
William H. Claflin, III
Robert H. Hopkins

FINANCE COMMITTEE

Henry Hixon Meyer
Horace W. Frost
William A. Parker

PLANNING COMMITTEE

Henry Hixon Meyer
Horace W. Frost
William H. Claflin, III
Howland S. Warren

LeRoy A. Schall, M.D.
Edwin B. Dunphy, M.D.
Charles L. Schepens, M.D.
Francis S. Hill

BUILDING COMMITTEE

Henry Hixon Meyer
Horace W. Frost
William H. Claflin, III

Edwin B. Dunphy, M.D.
LeRoy A. Schall, M.D.
Francis S. Hill

RESEARCH COMMITTEE

William H. Claflin, III, *Chr.*
Henry F. Allen, M.D.
Endre A. Balazs, M.D.
George P. Berry, M.D.
David G. Cogan, M.D.
David C. Crockett
Edwin B. Dunphy, M.D.
Robert H. Gohd, Ph.D.
W. Morton Grant, M.D.
Francis S. Hill

John W. Irwin, M.D.
George Kelemen, M.D.
Moses H. Lurie, M.D.
Philip E. Meltzer, M.D.
Walter A. Rosenblith, ING. RAD.
LeRoy A. Schall, M.D.
Charles L. Schepens, M.D.
William D. Sohier, Jr., M.D., *Ex. Sec.*
Herman J. Sternstein, M.D.
William Stone, Jr., M.D.

Francis L. Weille, M.D.

PARKING COMMITTEE

George A. McLaughlin
Arthur L. Sherin
Francis S. Hill

SALARY COMMITTEE

Henry Hixon Meyer
Horace W. Frost
William H. Claflin, III
Francis S. Hill

RATES COMMITTEE

Howland S. Warren
Robert H. Hopkins
Francis S. Hill

PENSION COMMITTEE

Francis S. Hill
Charles Wood
Raymond W. Lyons

ONE HUNDRED AND THIRTY-SECOND ANNUAL REPORT

SOCIAL SERVICE ADVISORY COMMITTEE

Henry K. Porter, *Chr.*
Mrs. Varaztad H. Kazanjian
Mrs. Edgar M. Holmes

Moses H. Lurie, M.D.
Robert R. Trotter, M.D.
Miss Ruth Farrisey, R.N.

Weston Howland, Jr.

HOUSE COMMITTEE

Mrs. John W. Farley, *Chr.*
Melville Chapin
Abraham Pollen, M.D.
George F. Reed, M.D.

PUBLIC RELATIONS ADVISORY COMMITTEE

Francis W. Hatch, Jr., *Chr.*
Daniel F. Miller, M.D.
Thomas H. Hoare

LADIES VISITING COMMITTEE

<i>Chairman</i>	.	.	.	.	.	.	Mrs. Varaztad H. Kazanjian
<i>Secretary</i>	.	.	.	.	.	.	Mrs. Roy R. Wheeler
<i>Recording Secretary</i>	.	.	.	.	.	.	Mrs. Harry E. Braconier
<i>Treasurer</i>	.	.	.	.	.	.	Mrs. Herbert W. Kelley

Mrs. David H. Bangs	Mrs. Harold S. Geneen	Mrs. John R. Richardson
Mrs. William A. Barron, Jr.	Mrs. W. Morton Grant	Mrs. Walter E. Robb
Mrs. Herbert Barry, Jr.	Mrs. Trygve Gundersen	Mrs. William P. Rogers, Jr.
Mrs. Lawrence Bass	Mrs. George Freeman Hall	Mrs. Benjamin Sachs
Mrs. Maurice Berlin	Mrs. Bartlett Harwood	Mrs. Ernest J. Sargeant
Mrs. Arlie V. Bock	Mrs. Valentine Hollingsworth	Mrs. Sullivan A. Sargent
Mrs. Nehemiah Boynton, Jr.	Mrs. Edgar M. Holmes	Mrs. LeRoy A. Schall
Mrs. Harry P. Cahill	Mrs. Francis T. Hunter	Mrs. Charles L. Schepens
Mrs. Paul A. Chandler	Mrs. Carl C. Johnson	Mrs. Henry R. Scott
Mrs. Richard B. Chapman	Mrs. Edward C. Johnson	Mrs. Reginald H. Smith
Mrs. Joseph M. Clough	Mrs. Victor H. Kazanjian	Mrs. William B. Snow, Jr.
Mrs. David G. Cogan	Mrs. Edgar H. Kent	Mrs. Leslie Soule
Mrs. Colin McA. Cunningham	Mrs. Edmund V. Keville	Mrs. Philip H. Suter
Mrs. Henry E. W. Cunningham	Mrs. Robert E. Klotz	Mrs. Channing S. Swan
Mrs. Richard Cary Curtis	Mrs. Joseph Lentine	Mrs. Thomas C. Thacher
Mrs. Benjamin C. Davis	Mrs. William W. McCarthy	Mrs. John E. Thayer, Jr.
Mrs. Livingston Davis	Mrs. G. Gardner Monks	Mrs. D. Stephen Thrall
Mrs. Walter C. Dodge	Mrs. Henry D. Minot	Mrs. Robert Truesdale
Mrs. Weld Douglass	Mrs. William W. Montgomery	Mrs. Frederick H. Verhoeff
Mrs. Edwin B. Dunphy	Mrs. Noel Morss	Mrs. George Vinsonhaler
Mrs. John Wells Farley	Mrs. Stephen P. Mugar	Mrs. Lyon Weyburn
Mrs. Arthur F. Fay	Mrs. Grafton H. Perkins	Mrs. John R. Whitney
Mrs. Henry H. Fay	Mrs. Henri Prunaret	Mrs. Harold Willis
Mrs. Allen R. Finlay	Miss Mary A. Redman	Mrs. Andrew Winslow, Jr.
Mrs. John R. Frazee	Mrs. Franklin A. Reece	Mrs. Stewart C. Woodworth
	Mrs. George F. Reed	

HONORARY MEMBERS

Miss Sally Fairchild

Mrs. Harris P. Mosher

Mrs. Harold Peabody

Department of Ophthalmology

Chief of Ophthalmology
Edwin B. Dunphy, M.D.

Consulting Chief of Ophthalmology
Frederick H. Verhoeff, M.D.

Surgeons in Ophthalmology

William P. Beetham, M.D.	David G. Cogan, M.D.
Virgil G. Casten, M.D.	Brendan D. Leahey, M.D.
Trygve Gundersen, M.D.	Mahlon T. Easton, M.D.

Associate Surgeons in Ophthalmology

Hugh C. Donahue, M.D.	Garrett L. Sullivan, M.D.
-----------------------	---------------------------

Assistant Surgeons in Ophthalmology

Edward E. Covitz, M.D.	Taylor R. Smith, M.D.
S. Forrest Martin, M.D.	William Stone, Jr., M.D.
Thomas Cavanaugh, M.D.	Frederic B. Breed, M.D.
Henry A. Mosher, M.D.	Robert J. Brockhurst, M.D.
Earle S. Seale, M.D.	Warren D. Haley, M.D.
Carl C. Johnson, M.D.	Thomas P. Cronin, M.D.
Abraham Pollen, M.D.	Edwin B. Goodall, M.D.
Sumner D. Liebman, M.D.	John M. Hill, M.D.
Harry E. Braconier, M.D.	Linley C. Happ, M.D.

Assistants in Ophthalmology

D. Robert Alpert, M.D.	Ichiro D. Okamura, M.D.
Peter Beck, M.D.	Irving L. Pavlo, M.D.
S. Arthur Boruchoff, M.D.	Charles D. J. Regan, M.D.
S. James Bullington, M.D.	Paul M. Runge, M.D.
Arthur F. Calnan, M.D.	Baruch J. Sachs, M.D.
Richard B. Chapman, M.D.	Alfred W. Scott, M.D.
David D. Donaldson, M.D.	John J. Sullivan, M.D.
Joseph L. Dowling, Jr., M.D.	Robert R. Trotter, M.D.

Residents in Ophthalmology

Ephraim Friedman, M.D.	Byron S. Lingeman, M.D.
John R. Gehring, M.D.	George M. Olive, Jr., M.D.
Firmon E. Hardenbergh, M.D.	Donald P. Tucker, M.D.
Morriss M. Henry, M.D.	Jeremy B. Whitney, M.D.

Assistant Resident in Ophthalmic Pathology

Ann S. Morgan, M.D.

Fellows in Ophthalmology

Otto Jungschaffer, M.D.	Chester T. Pryor, II, M.D.
Pei-Fei Lee, M.D.	J. Lawton Smith, M.D.
David Lozano, M.D.	Edward C. Sweebe, M.D.
Lemuel T. Moorman, M.D.	Silvio von Pirquet, M.D.
	Benjamin Ziv, M.D.

Consulting Surgeons in Ophthalmology

Samuel H. Wilkins, M.D.	Merrill J. King, Sr., M.D.
Ralph H. Ruggles, M.D.	Benjamin Sachs, M.D.
	Paul A. Chandler, M.D.

Consultant in Eye Pathology

Parker Heath, M.D.

ONE HUNDRED AND THIRTY-SECOND ANNUAL REPORT

Department of Otolaryngology

Chief of Otolaryngology
LeRoy A. Schall, M.D.

Surgeons in Otolaryngology

Francis L. Weille, M.D.	Walter J. E. Carroll, M.D.
Maurice G. Evans, M.D.	John R. Richardson, M.D.
Vincent J. Kelley, M.D.	John R. Frazee, M.D.

Surgeon for the Service of the Deaf
Philip E. Meltzer, M.D.

Surgeon for Plastic Operations
Edgar M. Holmes, M.D.

Surgeon for Bronchoscopy and Esophagoscopy
John R. Richardson, M.D.

Associate Surgeons in Otolaryngology

Joseph Lentine, M.D.	Donald K. Lewis, M.D.
J. Charles Drooker, M.D.	Daniel Miller, M.D.
Herman J. Sternstein, M.D.	John E. McKeigue, M.D.
	Bernard Zonderman, M.D.

Assistant Surgeon for Plastic Operations
Aram Roopenian, M.D.

Assistant Surgeons in Otolaryngology

Elizabeth DeBlois, M.D.	Kenneth A. Kazanjian, M.D.
Frank R. Shlossberg, M.D.	George F. Reed, M.D.
Charles Kent, M.D.	Anthony Zovickian, M.D.
Maurice Ruben, M.D.	William P. Rogers, Jr., M.D.
	William W. Montgomery, M.D.

Assistants in Otolaryngology

Hugo D. Angelini, M.D.	Robert E. Klotz, M.D.	Morris Swartz, M.D.
Louis E. Griffey, M.D.	Mendell Robinson, M.D.	Albert Weiser, M.D.
Lawrence S. Hirsch, M.D.		Sidney R. Wilker, M.D.

Carlos A. Castellanos, M.D.	Bernard N. Gotlib, M.D.	Peter Oliver, M.D.
Robert W. Clubb, M.D.	Robert P. Gulick, M.D.	David L. Pierce, M.D.
Clark S. Collins, M.D.	William Hayden, M.D.	James B. Snow, Jr., M.D.
Sumner L. Freeman, M.D.	Julius N. Hicks, M.D.	August L. Stemmer, M.D.
	Alfred L. Hurst, M.D.	

Fellows in Otolaryngology
Geza Jako, M.D. Arthur S. Woodward, M.D.

<i>Research Associates in Otolaryngology</i>	<i>Research Assistant in Otolaryngology</i>	<i>Electronics Engineers in Otolaryngology</i>
Walter A. Rosenblith, Ing. Rad.	Nelson Y. Kiang, Ph.D.	Robert M. Brown, B.S.
Himli Arslan, M.S.		Alan Crist, B.S.
Walter S. Burrage, M.D.		

Consulting Surgeons in Otolaryngology

D. Harold Walker, M.D.	Edwards W. Herman, M.D.	Moses H. Lurie, M.D.
Frederick L. Bogan, M.D.	Gustave B. Fred, M.D.	Robert L. Goodale, M.D.
Leon E. White, M.D.	Philip Mysel, M.D.	Carl H. Ernlund, M.D.
George H. Poirier, M.D.	Lyman G. Richards, M.D.	Charles H. Allman, M.D.

Consulting Surgeon for Plastic Operations
Varaztad H. Kazanjian, M.D.

MASSACHUSETTS EYE AND EAR INFIRMARY

<i>Roentgenologist</i> Alexander S. Macmillan, M.D.	<i>Assistant Roentgenologist</i> Alexander S. Macmillan, Jr., M.D.
<i>Anesthesiologist</i> John C. Snow, M.D.	<i>Fellows in Anesthesiology</i> Peggy Joan Clark-Roberts, F.F.A.R.C.S. Eng. Raniero Di Piero, M.D.
<i>Director of Ophthalmic Pathology</i> Taylor R. Smith, M.D.	<i>Assistant Ophthalmic Pathologist</i> Toichiro Kuwabara, M.D.
<i>Director of Otolaryngological Pathology</i> Werner Mueller, M.D.	<i>Director of Otolaryngological Research</i> Moses H. Lurie, M.D.
<i>Associate Director of Ophthalmic Resident Training</i> Paul A. Chandler, M.D.	<i>Research Associate</i> George Kelemen, M.D.
<i>Biochemists</i> Endre A. Balazs, M.D. Sidney Futterman, Ph.D. Harold Kern, D. Sc. Jin H. Kinoshita, Ph.D. S. Peter Marfey, Ph.D.	<i>Director of Micro-Circulatory and Auditory-Physiology Laboratories</i> John W. Irwin, M.D.
<i>Biologists</i> Leona Zacharias, Ph.D. Marie Jakus, Ph.D.	<i>Research Virologist</i> Robert S. Gohd, Ph.D.
	<i>Bacteriologist</i> Anita Mangiaracine, A.B.
	<i>Pharmacist</i> John T. Murphy, Phm.D.

Myles P. Baker, M.D.
William H. Baker, M.D.
Victor G. Balboni, M.D.
Walter Bauer, M.D.
William S. Beck, M.D.
Edward E. Bland, M.D.
Allen G. Brailey, M.D.
Evan Calkins, M.D.
John W. Cass, Jr., M.D.
Earle M. Chapman, M.D.
Richard J. Clark, M.D.
Perry J. Culver, M.D.
Briant L. Decker, M.D.
Charles H. DuToit, M.D.
Daniel S. Ellis, M.D.
Dana L. Farnsworth, M.D.

Consulting Physicians

John H. Fay, M.D.
Anne P. Forbes, M.D.
William Franklin, M.D.
Allan L. Friedlich, M.D.
Harriet L. Hardy, M.D.
Reed Harwood, M.D.
Benjamin L. Huntington, M.D.
Kurt J. Isselbacher, M.D.
Bernard M. Jacobson, M.D.
Rita M. Kelley, M.D.
Alfred Kranes, M.D.
Alexander Leaf, M.D.
Jacob Lerman, M.D.
Francis C. Lowell, M.D.
Janet W. McArthur, M.D.
Gordon S. Myers, M.D.

Arthur S. Pier, Jr., M.D.
Helen S. Pittman, M.D.
Walter W. Point, M.D.
John T. Quinby, M.D.
Marian W. Ropes, M.D.
David D. Rutstein, M.D.
Charles L. Short, M.D.
John B. Stanbury, M.D.
John D. Stoeckle, M.D.
George P. Sturgis, M.D.
Morton N. Swartz, M.D.
Arthur L. Watkins, M.D.
Edwin O. Wheeler, M.D.
Conger Williams, M.D.
Richard G. Whiting, M.D.
Paul C. M. Zamecnik, M.D.

Consulting Dermatologists

John Adams, Jr., M.D.
Earle A. Glicklich, M.D.
Robert D. Griesemer, M.D.
Milton E. Helman, M.D.

William R. Hill, Jr., M.D.
Walter F. Lever, M.D.
Mildred Ryan, M.D.
Maurice M. Tolman, M.D.

Robert F. Tilley, M.D.

Consulting Neurologists

John A. Abbot, M.D.
Raymond D. Adams, M.D.
Mandel E. Cohen, M.D.
Edwin M. Cole, M.D.
Philip R. Dodge, M.D.

Charles M. Fisher, M.D.
Vincent P. Perlo, M.D.
Edward P. Richardson, Jr., M.D.
Robert S. Schwab, M.D.
William Timberlake, M.D.

Maurice Victor, M.D.

ONE HUNDRED AND THIRTY-SECOND ANNUAL REPORT

Consulting Psychiatrists

Morris H. Adler, M.D.
Herbert Barry, Jr., M.D.
Clemens E. Benda, M.D.
Gerald Caplan, M.D.
Franklin Carter, M.D.
Morris E. Chafetz, M.D.
Lincoln D. Clark, M.D.
Daniel C. Dawes, M.D.
Benjamin F. Gill, M.D.
Volta R. Hall, M.D.
Richmond Holder, M.D.
Paul M. Howard, M.D.
Samuel Kaplan, M.D.
John H. Lamont, M.D.
Erich Lindemann, M.D.
Robert T. Long, M.D.
Maria Lorenz, M.D.
Walter Mann, M.D.
John C. Nemiah, M.D.
Gardner C. Quarton, M.D.
Peter E. Sifneos, M.D.
Alfred H. Stanton, M.D.
Jerome L. Weinberger, M.D.
Avery D. Weisman, M.D.
Vernon P. Williams, M.D.
Elizabeth R. Zetzel, M.D.

Consulting Pediatricians

T. Berry Brazelton, M.D.
Allan M. Butler, M.D.
Leo B. Burgin, M.D.
Albert Cohen, M.D.
John D. Crawford, M.D.
William A. Dickson, M.D.
LeRoy L. Eldredge, Jr., M.D.
Robert N. Ganz, M.D.
Arthur J. Linenthal, M.D.
Joseph J. McGovern, M.D.
Alexander S. Nadas, M.D.
Thomas C. Peebles, M.D.
Murray E. Pendleton, M.D.
William Pfeffer, Jr., M.D.
Charles V. Pryles, M.D.
Gertrud C. Reyersbach, M.D.
Ralph A. Ross, M.D.
Robert T. Sceery, M.D.
Mary Louise Scholl, M.D.
Marion L. Slemmons, M.D.
Nathan B. Talbot, M.D.
Wilhelmina VanDyke, M.D.
Louis Weinstein, M.D.
Eleonore C. Zaudy, M.D.

Consulting Surgeons

Marshall K. Bartlett, M.D.
Charles B. Burbank, M.D.
Bradford Cannon, M.D.
Edward D. Churchill, M.D.
Oliver Cope, M.D.
Gordon A. Donaldson, M.D.
F. Thomas Gephart, M.D.
Ward I. Gregg, M.D.
Edward Hamlin, Jr., M.D.
Francis M. Ingersoll, M.D.
Robert R. Linton, M.D.
Roy E. Mabrey, M.D.
William V. McDermott, Jr., M.D.
John B. McKittrick, M.D.
George L. Nardi, M.D.
William C. Quinby, Jr., M.D.
John W. Raker, M.D.
Grant V. Rodkey, M.D.
William P. Rogers, Jr., M.D.
J. Gordon Scannell, M.D.
Robert S. Shaw, M.D.
Richard H. Sweet, M.D.
Howard Ulfelder, M.D.
William R. Waddell, M.D.
Claude E. Welch, M.D.
Frank C. Wheelock, Jr., M.D.
Earle W. Wilkins, Jr., M.D.

Consulting Neurosurgeons

H. Thomas Ballentine, Jr., M.D.
James C. White, M.D.
William H. Sweet, M.D.

Consulting Orthopedists

Otto E. Aufranc, M.D.
Joseph S. Barr, M.D.
Thomas F. Broderick, Jr., M.D.
Thornton Brown, M.D.
Carter R. Rowe, M.D.
Robert J. Joplin, M.D.
Paul L. Norton, M.D.
Eugene E. Record, M.D.
John A. Reidy, M.D.

MASSACHUSETTS EYE AND EAR INFIRMARY

Consultant in Pharmacology
Otto Krayer, M.D.

Consultant in Preventive Medicine
John E. Gordon, M.D.

Sylvester B. Kelley, M.D.
Walter S. Kerr, M.D.

Consulting Urologists
Wyland F. Leadbetter, M.D.
Howard I. Suby, M.D.
Lorande M. Woodruff, M.D.

Consulting Endoscopist
Edward B. Benedict, M.D.

Benjamin Castleman, M.D.
Richard B. Cohen, M.D.
Winfield S. Morgan, M.D.
Robert E. Scully, M.D.

Consulting Pathologists
Donald C. Sniffen, M.D.
David Spiro, M.D., Ph.D.
Edgar B. Taft, M.D.
Austin L. Vickery, Jr., M.D.

Laurence L. Robbins, M.D.

Consulting Radiologists
Milford D. Schulz, M.D.
Stanley M. Wyman, M.D.

Consulting Bacteriologists
Louis Dienes, M.D.
Lawrence J. Kunz, Ph.D.

1959 Service Awards

Thirty Year Pins

Vincent H. Farley
Optical Shop

Mary Foley
Housekeeping

Elizabeth Ward, R.N.
Nursing Department

Twenty Year Pins

Ellen McCarthy, R.N.
Nursing Department

Alice Reed
Housekeeping

Ten Year Pins

Dorothy Linden
Temporal Bone Laboratory

Rita Lovely
Ward Secretary

Dorothy Pierce
Secretaries' Office

Constance Wilbur, R.N.
X-Ray

George Zink
Maintenance

ONE HUNDRED AND THIRTY-SECOND ANNUAL REPORT

The Clinics

Assistant Director in Charge of Clinics E. Michael White
Executive Officer Ruth Farrisey, R.N.

Howe Laboratory of Ophthalmology

Director — David G. Cogan, M.D.

John S. Andrews, Jr., Ph.D.	W. Morton Grant, M.D.	Carl Kupfer, M.D.
Eugene C. Ciccarelli, M.D.	Harold L. Kern, Sc.D.	Lorenzo O. Merola, B.S.
David D. Donaldson, M.D.	Jin H. Kinoshita, Ph.D.	J. Lawton Smith, M.D.
Andrew J. Gay, Jr., M.D.	Toichiro Kuwabara, M.D.	Abraham Spector, Ph.D.

Winthrop Foundation and Clinic for the Deaf

Surgeon in Charge — Philip E. Meltzer, M.D.

<i>Associate Surgeon in Charge</i>	<i>Surgeon</i>	<i>Assistant Surgeons</i>
Donald K. Lewis, M.D.	Francis L. Weille, M.D.	Bernard Zonderman, M.D.
		Robert E. Klotz, M.D.

Audiologist — Albert W. Koch, Ed.D.

Executive Committee

D. Harold Walker, M.D., <i>Chairman</i>	Philip E. Meltzer, M.D.
LeRoy A. Schall, M.D.	Moses H. Lurie, M.D.
Donald K. Lewis, M.D.	Francis L. Weille, M.D.

Retina Foundation

Director — Charles L. Schepens, M.D. *Associate Director* — Endre A. Balazs, M.D.

Dorothy Azrin, Ed.M.	Allen R. Gaynor, B.S.	Emery Nyilas, Dipl. Eng.
Robert J. Brockhurst, M.D.	John Gergely, M.D., Ph.D.	Ichiro D. Okamura, M.D.
Gordon L. Brownell, Ph.D.	Arthur F. Howe, Ph.D.	Adolph Pietruszkiewicz, B.S.
S. James Bullington, M.D.	Marie A. Jakus, Ph.D.	Marion A. Ryan, B.A.
Joel Contreras, M.D.	Marjanna Jansen, B.A.	William J. Stenstrom, B.S.
Marcella H. DeRoche, B.A.	Christine D. Jardetzky, Ph.D.	Laszlo Z. J. Toth, Ph.D.
Kathryn F. Dewey, B.A.	David O. Jesberg, M.D.	Robert B. Welch, M.D.
Perry H. Dickinson, B.S.	Otto H. Jungschaffer, M.D.	Ernst Wolf, Ph.D.
Claes-Henrik Dohlman, M.D.	David Lozano, M.D.	Claudine Z. Yannoni, B.A.
Elizabeth Ann Eckl, B.A.	Charles V. Mahlmann, M.S.	Michael J. Zigler, Ph.D.
Robert S. Ferrera, B.S.	Anja Mitchell	Benjamin Ziv, M.D.
	Lemuel T. Moorman, M.D.	

Boston Eye Bank Serving New England

Executive Committee

Edwin B. Dunphy, M.D.	Henry Hixon Meyer
Brendan D. Leahey, M.D.	Mrs. Richard Cary Curtis
Mrs. William A. Slade, Jr.	Mrs. Virginia Gerould

General Director: Garrett L. Sullivan, M.D.

Executive Secretary: Nancy A. Hunt

MASSACHUSETTS EYE AND EAR INFIRMARY

Treasurer's Report

BALANCE SHEET

September 28, 1958

ASSETS

Cash in Bank and on Hand		\$ 757,018.04
Investments — Book Value:		
Securities	\$3,729,207.53	
Interest in parcel of real estate	1.00	
Interest in unsettled estate	1.00	3,729,209.53
Accounts Receivable:		
Patients — less reserve for doubtful accounts	\$ 149,185.01	
Miscellaneous	6,428.49	155,613.50
Inventories of Supplies, etc.		23,985.88
Plant:		
Land and buildings acquired prior to January 1, 1949 (book value)	\$ 491,741.99	
Additional facilities acquired since January 1, 1949 (cost)	2,066,608.08	
	\$2,558,350.07	
Less: Reserve for depreciation	537,465.00	2,020,885.07
Construction in Progress		485,853.51
TOTAL		\$7,172,565.53

LIABILITIES AND FUNDS

Advances from Patients	\$ 494.37
Accounts Payable and Accruals	78,925.57
Special Funds	2,192.43
General Fund	3,188,124.76
General Pension Reserve	255,430.36
Research Fund	8,395.48
Permanent Funds — Income Restricted	1,027,846.65
Permanent Funds — Income Unrestricted	2,331,387.82
Special Purpose Funds	230,719.87
Unexpended Restricted Income of Permanent Funds	49,048.22
TOTAL	\$7,172,565.53

ONE HUNDRED AND THIRTY-SECOND ANNUAL REPORT

INCOME ACCOUNT *for the period ended September 28, 1958 (52 weeks)*

Hospital Income as per Director's Report		\$2,025,427.06
Hospital Expenses as per Director's Report (including provision for depreciation — \$127,215) — See Note		2,342,370.11
Excess of Hospital Expenses Over Hospital Income		\$ 316,943.05
Income from Investment Securities, less Income Applicable to Restricted Funds and to General Pension Reserve		\$181,909.50
Receipts from United Community Services, Committee of the Permanent Charity Fund, Inc., Estates of Elisha V. Ashton, G. Gorham Peters and Others		57,349.87
		\$239,259.37
Less: Treasurer's Disbursements		14,427.08
DEFICIT FOR THE PERIOD		\$ 224,832.29
		\$ 92,110.76

Note: During the period, hospital operating expenses aggregating \$63,903.15 were charged directly against principal and income of Permanent Funds as follows:

Principal	\$47,765.03
Income	16,138.12
Total	\$63,903.15

AUDITORS' CERTIFICATE

We have examined the balance sheet of MASSACHUSETTS EYE AND EAR INFIRMARY as at September 28, 1958 and the related income account for the period ended at that date (52 weeks).

Our examination was made in accordance with generally accepted auditing standards and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

The accompanying statements reflect a provision for depreciation in the amount of \$127,215 based on a percentage of the patient care expenses of the Infirmary. This provision has been recorded in accordance with the requirements of statutory author-

ity pertaining to per diem reimbursement for hospital services rendered under contract with certain third party agencies. We are unable to express an opinion as to the adequacy of the provision for depreciation in relation to plant costs.

Subject to the exception noted above, in our opinion, the accompanying balance sheet and related income account present fairly the financial position of Massachusetts Eye and Ear Infirmary at September 28, 1958 and the results of its operations for the period ended at that date, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding period.

Boston, Massachusetts
November 25, 1958

PATTERSON, TEELE & DENNIS

MASSACHUSETTS EYE AND EAR INFIRMARY

SUMMARY OF INVESTMENTS

(As of September 26, 1958)

	Book Value*	Market Value*	% of Market Value
BONDS:			
U. S. Government	\$ 944,539	\$ 910,593	14.1
Canadian Government	53,000	49,812	0.8
Railroad	152,299	124,443	1.9
Public Utility	145,928	135,490	2.1
Industrial	183,007	173,318	2.7
Financial	17,843	16,560	0.3
Miscellaneous	1,900	1,900	—
TOTAL BONDS	\$1,498,516	\$1,412,116	22.0
PREFERRED STOCKS:			
	\$ 141,925	\$ 167,650	2.6
COMMON STOCKS:			
Railroad	\$ 156,717	\$ 298,385	4.6
Public Utility	414,766	839,273	13.0
Industrial	917,131	2,685,511	41.6
Bank and Finance	290,654	445,931	6.9
Insurance	189,728	412,150	6.4
Investment Trust	25,000	50,750	0.8
TOTAL COMMON STOCKS	\$1,993,996	\$4,732,000	73.3
TOTAL GENERAL FUND	\$3,634,437	\$6,311,766	97.9
WINTHROP FUND	\$ 84,270	\$ 132,694	1.9
WEBER FUND	\$ 10,500	\$ 10,144	0.2
GRAND TOTAL	\$3,729,207	\$6,454,604	100.0

* Cents omitted.

OPERATING ANALYSIS

For the period ended September 28, 1958 (52 weeks)

Income from Patients	\$2,164,555.84
Income from Other Sources	101,317.61
TOTAL GROSS HOSPITAL INCOME	\$2,265,873.45
Allowances to Patients for "free care"	135,884.28
Further Deductions for Bad Debts	24,922.31
Allowances to Blue Cross and Other Agencies	79,639.80
TOTAL FREE SERVICE	\$ 240,446.39
NET INCOME	2,025,427.06
Salaries and Wages	\$1,266,690.15
Supplies and Expenses	691,178.13
Clinic Expenses	237,693.01
Extraordinary Expenses	19,593.82
TOTAL OPERATING EXPENSES	\$2,215,155.11
DEPRECIATION	\$ 127,215.00
HOSPITAL DEFICIT	189,728.05
TOTAL HOSPITAL DEFICIT	\$ 316,943.05

HORACE W. FROST,
Treasurer

ONE HUNDRED AND THIRTY-SECOND ANNUAL REPORT

Administration

<i>Director</i>	Francis S. Hill
<i>Assistant Director</i>	Charles T. Wood
<i>Comptroller</i>	Raymond W. Lyons
<i>Administrative Assistant</i>	Kenneth W. Cadman
<i>Administrative Assistants, Admitting Office</i>	Henrietta I. Olsen, R.N. Ruth W. Hutchinson, R.N. Mrs. Ruth Gutteridge, R.N. Mrs. Christine Nielsen, R.N. Ruth Straitiff

Nursing Department

Director of Nursing Service and Nursing Education Mrs. Margaret Verrill, R.N.
Assistant Director of Nursing Service Pauline Metras, R.N.

Directors of Departments and Units

Directors of Affiliated Departments

Director, School of Nursing and Nursing Service Ruth Sleeper, R.N.
Director of Dietetics, School of Dietetics Louise Hatch
Maintenance, Assistant Joseph W. Degen
Medical Records Mary E. Converse
Personnel Director Edmund R. Mattos

Comparative Statistics

HOSPITAL

	1957	1958
Service Patients — Eye Cases	1,438	1,475
Ear, Nose and Throat Cases	1,399	1,695
<i>Total Service Patients Admitted</i>	<hr/> 2,837	<hr/> 3,170
Private Patients — Eye Cases	2,614	2,869
Ear, Nose and Throat Cases	2,603	2,638
<i>Total Private Patients</i>	<hr/> 5,217	<hr/> 5,507
TOTAL PATIENTS ADMITTED	8,054	8,677
Operations, Service — Eye Cases	1,345	1,507
Ear, Nose and Throat Cases	1,112	1,334
Operations, Private — Eye Cases	2,754	2,543
Ear, Nose and Throat Cases	2,588	3,034
TOTAL OPERATIONS	7,799	8,418

CLINICS

New Patients — Eye Clinic	4,850	4,570
Ear, Nose and Throat Clinic	2,538	2,843
TOTAL NEW PATIENTS	7,388	7,413
Revisits — Eye Clinic	39,258	39,310
Ear, Nose and Throat Clinic	18,969	22,604
TOTAL CLINICAL REVISITS	58,227	61,914
Visits — Eye Clinic	44,108	43,880
Ear, Nose and Throat Clinic	21,507	25,447
TOTAL CLINICAL VISITS	65,615	69,327
Emergency Patients Admitted to Hospital	196	324
Patients Admitted to Emergency Ward	6,580	8,407

Comparative Statistics

	1957	1958
Patients Days Care — Service	18,959	19,567
Private	28,767	29,478
TOTAL PATIENTS DAYS CARE	47,726	49,045
Average Number of Patients Treated Daily —		
Service	52	54
Private	79	81
TOTAL AVERAGE TREATED DAILY	131	135
Average Number of Days Patients Remain — Service	6.6	6.2
Private	5.5	5.4
Beds Available and Percent of Occupancy — Service	62 63%	80 68%
Private	102 78%	89 88%
TOTAL BEDS AVAILABLE	164	169
Per Capita Cost Per Day — Service, Routine Care	\$21.32	\$23.40
Special Services	8.98	9.22
TOTAL COST PER DAY PER SERVICE PATIENT	\$30.30 (A)	\$32.62 (A)
Per Capita Cost Per Day — Semi-Private, Routine Care	\$23.69	\$26.00
Special Services	9.97	10.25
TOTAL COST PER DAY PER SEMI-PRIVATE PATIENT	\$33.66 (A)	\$36.25 (A)
Per Capita Cost Per Day — Private, Routine Care	\$27.24	\$29.90
Special Services	11.47	11.79
TOTAL COST PER DAY PER PRIVATE PATIENT	\$38.71 (A)	\$41.69 (A)
Condition of Service Patients on Discharge — Died	12	10
Autopsies	33%	33%
Left Against Advice	1	0
Discharged	2,839	3,170

(A) Overhead Ratio 27%.

Report of the President

IN these days of expanding medical knowledge and mushrooming demands for improved patient care, it is important that every hospital should from time to time review its recent past and catalogue the lessons learned in order that criteria may be established to guide plans for the future. The substantial completion this year by the Infirmary of its program of renovation, improvement and expansion undertaken ten years ago offers an appropriate occasion for such a review.

It must always be borne in mind that the Infirmary is a specialty hospital. While its two services are primarily concerned with causes of blindness and deafness, circumstances arise continually which require a wide variety of the best consultative assistance, and this must be available on a stand-by basis to meet emergencies. Accordingly the Infirmary must be closely associated with and adjacent to a great general hospital, as it is. This is not, of course, a one-way street because the services of the Infirmary and its staff are equally essential and available to the Massachusetts General Hospital, which need not include those specialties among its departments. Theoretically, joint operation of services should also be beneficial, but in some cases may be more productive of delays and inefficiency, particularly for the smaller institution.

There can be no substitute for quality — no second best. The Infirmary is today one of the world's leaders in its specialties. This is true in the fields of teaching and research as well as in patient care. All our efforts must be directed to maintain this position. Growth must be held to that which can be administered in the most efficient manner and projects must not be undertaken unless they have real merit and can be staffed with personnel of the highest competence.

Quality care of patients involves many intangibles in addition to technical knowledge and abilities. The attitudes of the staff and personnel towards each other as well as towards the patients, comfortable quarters, attractive surroundings, good food served at sensible hours, kindness and understanding all play a vital part. The Infirmary has recognized the great value of these intangibles in the care of patients, is continually seeking ways to make a visit to the hospital more acceptable and has acquired an enviable reputation in this respect. The accomplishment of this has taken lots of hard work over a long period. It could be lost, however, in a very short space of time for bad news travels fast.

HIGH QUALITY FROM TEAM WORK

The attainment of high quality in patient care, teaching and research depends in large measure

upon personal and careful administrative control by the Director of the hospital, the Chiefs of service, the directors of the laboratories, the heads of the various departments and their several assistants. It requires an intimate and current knowledge by each of all that is taking place in the Infirmary. Each has his own functions and responsibilities but all must work together as a team. The President, as captain of this team, should also maintain as close contact as possible with current operations in order that he may be in a position to advise, to explain problems to the Board of Managers and to make decisions in emergencies which are bound to occur. Obviously all of this is easier to accomplish in an institution the size of the Infirmary than in a much larger one. Expansion of our facilities and services should be held within such bounds that the quality we have developed will not be lost through impersonal and bureaucratic direction and controls.

The Infirmary exists because of gifts made to it during more than a hundred years by countless individuals, funds, foundations and governmental agencies. Thus we have accepted a great public trust and must see that the Infirmary is operated efficiently and economically so that the income from its endowments will produce the greatest good. By our renovations during the last ten years we have reduced our bed capacity from over 200 to 169; but our present facilities are so flexible that we have substantially increased our patient days. In other words we are now making a high use of our facilities and are striving in every way to increase that use. The patient turnover at the Infirmary is high because the average patient stay is only $5\frac{1}{2}$ days. Over 95% of the patients admitted to the hospital receive operations. A large proportion of our out-patients require hospitalization and a large proportion of our hospital patients require follow-up care in the out-patient clinics. Our laboratories serve patients from both the hospital and the out-patient clinics. Our doctors, residents and technicians visit and care for patients of both categories. The Infirmary is able to carry this tremendous load because it is compact and efficient. The hospital, clinics and laboratories are adjacent to each other and steps are thus reduced to a minimum. Of course we need more space for everything but our expansion must be planned so that we maintain the compactness and efficiency we have developed.

Once again I wish to express on behalf of the Managers their appreciation for the cooperative efforts of all the staff and personnel. These efforts have been inspiring and are, of course, responsible for the growth and success of the Infirmary.

HENRY HIXON MEYER
President

Report of the Director

FOUR major reconstruction projects in different areas of the hospital were under way much of the year. Modernization of the second and third floors was not completed until late March. Construction of the new Central Supply, started in April, was not finished until September. Complete renovation of the X-Ray Department with the installation of new equipment continued for many months due to the necessity of operating the services during the building period. The fourth project was the Eaton-Peabody Laboratory of Auditory Physiology built between the hospital and the Gardner Building which was under construction for most of the year.

Operating a busy hospital in and around such extensive construction was difficult. Yet in spite of this handicap, we are pleased to report that admissions for the year went up 8%. Operations were up 8%; clinic visits, 5½%, and the number of patients using the facilities of our Emergency Rooms increased 28% over the previous year.

Financially the Infirmary did a little better than break even, before depreciation, for the full year. To accomplish this it was necessary to increase room rates \$2.00 across the board in March. Revisions upward were also made in operating room rates. In spite of these increases Infirmary charges compare favorably with other teaching hospitals in Metropolitan Boston. Operating expenses were up 7.6%, continuing the trend of recent years. Higher salaries and wages again account for the greater portion of this increase.

Flexibility provided by the completion of the four-bed rooms on the second and third floors has greatly increased the efficiency of the hospital, and occupancy has risen to over 80%. This improvement allowed us to return to Infirmary beds retina patients who had been boarding on Baker 9 at the Massachusetts General Hospital.

Other improvements added during the year include new filters in the operating rooms as recommended by the Infections Committee. These filters have proved most effective and are an added safety factor in the care of our patients. Another new facility in the operating rooms is a central system of piped nitrous oxide, and savings from bulk purchasing of this gas will, we believe, pay for the installation in a relatively short time.

A new paging system for our resident doctors and other key personnel has proved most effective. The

system consists of small pocket radios which can be activated from a call station in the telephone office on the top of the MGH White Building. In addition to the staff, the night supervisors and maintenance men, administration and chiefs of service have been provided with these instruments.

With parking becoming an increasing problem in the metropolitan area, the hospital for the first time retained Fitz-Inn Parking service to operate the cloverleaf parking space in front of the building. As a result of "live parking," we are able to accommodate 30 to 40% more cars. A nominal charge has been made to the staff and employees for this service.

During the year a Purchasing Department was set up at the Infirmary. Formerly purchases were made jointly through the Purchasing Department of the Massachusetts General Hospital. However, with the increased effectiveness of the more comprehensive Hospital Purchasing Corporation, the advantages to the Infirmary of joint purchasing with the MGH have lessened, and closer control of purchases and inventory, made possible under our own set-up, seems to outweigh the benefits of the former arrangement. Under the new system, moreover, the administration is given better opportunity to talk to salesmen who are often helpful in developing new ideas.

During the year considerable time has been spent in revising our Disaster Plan. Because of our proximity to a large general hospital, our plan is closely coordinated with the MGH for joint action.

NURSING EFFICIENCY AND MORALE

Our Nursing Department has been going through a reorganization which started about two years ago. Great progress can be reported, and without any question the morale and efficiency of the Department has had a noticeable effect on the entire hospital. Changes and improvements have continued throughout the years.

Difficulties were encountered and overcome on the floors when extra beds were put in temporary areas to replace bed space lost during the construction. When the new floors were opened, much planning by the Nursing Department went into the stocking and arranging of equipment for the most efficient care of patients and the convenience of our

staff doctors, with a committee of doctors and nurses meeting many times to plan the new set-up. Also a great deal of planning was necessary for the new Central Supply room which officially opened on September 17th.

In the spring when patients were moved back to the Infirmary from Baker 9, there was some doubt that the homogeneous atmosphere of Baker 9 could be duplicated at the Infirmary. We hope to maintain the Baker 9 feeling by segregating, as far as possible, the retina patients on the fourth floor, and time is showing that we are making great strides in this endeavor.

In general the efficiency of the Nursing Department has been increased by a reduction in part-time nurses, as shown by the following figures. In December 1957 we had 65 registered, full-time nurses and 27 part-time nurses. In December 1958 registered full-time nurses had increased to 80, and the part-time nurses reduced to seven. Necessarily, this improvement in staffing is expensive but is productive in better nursing care. The present nursing budget is \$505,000 and the nursing education budget is \$21,000 or a total of \$526,000. This is by far the largest personnel budget of the hospital and 30% of the total hospital expenses of \$2,300,000.

Because we are a specialized hospital caring exclusively for eye, ear, nose and throat patients, education in this field is an important function of the Nursing Department. It is not only important to offer training for post-graduate nurses but also to carry on an in-service educational program for the nurses on the staff who are actually working with our patients. This in-service educational program is held weekly, and instruction is provided by Infirmary staff doctors. In addition to this, the post-graduate course was active during the year. We are happy to find that over 90% of the nurses who graduated from the four-month course stayed on at the hospital as permanent personnel. In addition we graduated 11 licensed practical nurses from their four-month course, and nine of these nurses stayed with the hospital.

Thanks to the generosity of the Ladies Visiting Committee, nine nurses at the Infirmary were given scholarships for graduate courses at Boston University. This type of fringe benefit helps to make the Infirmary attractive to young and ambitious nurses.

A small group of Boston University graduate students came to the hospital last January for a series of lectures, demonstrations, observations and group discussions in eye, ear, nose and throat nursing. This was an elective portion of their graduate program at Boston University School of Nursing and one which we hope will continue in the future. Also, senior students from Simmons College School

of Nursing came to us for educational experience with service patients. This program seems to be developing very satisfactorily. The importance of these graduate programs becomes all the more apparent when it is remembered that our last student affiliation terminated in June when the Massachusetts General Hospital ended its student nurse affiliation. This we regret since we are convinced that eye, ear, nose and throat nursing education and experience is a valuable part of the nursing curriculum.

During the year arrangements were made with the Boston School of Occupational Therapy for their students to attend the nursing lectures held for post-graduate students at the Infirmary. This arrangement seems to be working out satisfactorily both from the students' point of view and also because lack of duplication saves both time and money.

Next to Nursing the Dietary Department has the closest contact with the patient. For 12 months now our patients have been receiving their main meal in the evening rather than at noon, and the service floors have had meals at a later hour to the satisfaction of both the patients and the Nursing Department. As the Dietary Department has been pleased with the results in patient response and in actual tray service, this change seems well worth the addition of extra help in the kitchen necessary to put it into effect. The next undertaking of the department will be selective menu for the service floors, expected in November.

The number of meals served in the cafeteria again was higher, showing an increase of 10%. The new room set aside for the doctors has proved popular and is giving the medical staff the desired opportunity for informal discussion. Student dieticians from the MGH rotate through the Infirmary for a period of four weeks to get their required small hospital training in dietetics. This affiliation works out well for both hospitals and is stimulating to the Infirmary personnel who must do the teaching.

Teaching is not limited to the Nursing and Dietary departments but is also carried on in Social Service, Ocular Motility and Occupational Therapy. In addition some of the research laboratories are training technicians on an in-service basis.

SPACE NEEDS AND THE FUTURE

During the past year the hospital has been under pressure from the research laboratories to provide additional space for expansion. The Howe Laboratory of Ophthalmology is planning to add two research rooms on top of the Research Floors and

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has already raised the money to finance this project. The Eaton-Peabody Laboratory which is affiliated as a joint project with the Massachusetts Institute of Technology, is planning an additional laboratory for biochemistry. The Retina Foundation is completing plans for a new building near the hospital for research to replace their present facilities at 30 Chambers Street, which is in the West End Urban Redevelopment Area.

Money raising activities of the Infirmary for both research and hospital improvements have been under the direction of Denholm M. Jacobs, Associate Director, for the past three years. His resignation was regretfully accepted this fall, and during the interim while a replacement is being found, the office is under the direction of Mrs. Virginia Gerould, Director of Public Relations. Mr. Jacobs is now working with the Retina Foundation.

The most pressing need at this time is for funds to accomplish the renovation of the Eye, Ear, Nose and Throat clinics with plans that are now under consideration. The money received from the annual December mail appeal will be allocated to these clinic improvements.

Another area needing renovation is the Trustees' Room on the second floor, and we are delighted to have the Ladies Visiting Committee undertake redecorating this room so that it will serve a wide variety of needs. The LVC has completed another very successful year in its attractive Gift Shop where

about forty-five members put in close to 2500 hours of volunteer work during the year.

The MDC has announced plans to revise the intersections at the Charles Street circle and to install traffic lights to improve the traffic situation in this area. Plans are also contemplated for moving Embankment Road towards the river and eliminating the traffic light directly in front of the Infirmary. It is believed this change will increase the number of parking spaces and provide one exit in the main parking area. These changes are planned for the spring and will undoubtedly cause inconvenience while the construction is in progress.

The Infirmary continues to be handicapped in its plans for the future by the obvious lack of space for building purposes. However, tentative plans for a new wing have been drawn by our architects. This wing could be built on hospital land parallel to the Charles Street wing and be connected at both the Phillips House and the Operating Room ends of the present structure. The plans include an auditorium. Such a wing would require the demolition of the Gardner Building and the air-conditioning of the entire present Infirmary. While these plans are in a most preliminary stage, we are hopeful that further progress will be made in the not too distant future.

FRANCIS S. HILL
Director

Department of Otolaryngology

WHEN on August 30, 1959, I reach the retiring age of the Harvard Medical School and the Massachusetts Eye and Ear Infirmary, I will have served 20 years as Chief of Otology and Laryngology. This is 14 years longer than my predecessor, the late Dr. Harris P. Mosher who was the first Chief of the combined services of Otology and Laryngology.

In this, my final report to the Board of Managers, I pray your indulgence if I review some of the happenings of the past 20 years and cite extracts from my annual reports over this period.

In 1939, Dr. Edwards W. Herman was assigned from the Infirmary staff to be surgeon with the Tumor Clinic. The formation of this special subdivision of the Throat Service was the direct result of the steadily mounting number of cases of cancer of the nose and throat which, because of improved

surgical techniques and the advances in the use of radiation therapy, were being treated at the Infirmary.

In 1940 through the interest of Dr. D. Harold Walker and the generosity of Mr. Frederic Winthrop, the Winthrop Foundation was established at the Infirmary with the purpose of rendering a better service to the hard of hearing patient. Dr. Ruth Gilder, formerly at the Clark School of the Deaf, became Director of the Foundation, and Dr. Werner Mueller was assigned as Otologist to this new and pioneering service.

Also at this time, Dr. Calvin G. Page, after his retirement from the faculty of the Harvard Medical School, came to the Mosher Laboratory as a volunteer part-time bacteriologist. With the introduction of the antibiotics, the necessity of a full-time bac-

teriologist was apparent. The old photographic dark room adjacent to the Mosher Laboratory was converted into a bacteriological laboratory and Mr. Thomas Blake transferred from the Howe Laboratory to become our first full-time bacteriologist.

It was in 1940 that Dr. Lyman Richards, who had had considerable experience in this work at the Children's Hospital, rejoined our staff as Surgeon in charge of Endoscopy. With three assistants, he now concentrated his work to this single branch of hospital service where, particularly in the case of foreign bodies swallowed by infants and small children, critical situations are often encountered.

1941 saw our Otolaryngological staff reduced to a mere skeleton as many of our physicians patriotically answered the call of military service. At this time Dr. Moses H. Lurie embarked on a research project under the auspices of the National Research Council. To facilitate this work, the Mosher Laboratory was remodeled, and Miss Dorothy Linden joined the staff as technician in otology to work with Dr. Lurie.

The exploratory work now under way in the Winthrop Foundation was augmented by support from the Paul Wilde Jackson Trust, the income from this grant being used for the benefit of children suffering from a hearing loss.

By 1942 at the request of the Surgeon General, our residency was reduced to 12 months. During this war emergency our patient services were greatly handicapped by having so many of our staff and residents in military service.

PROGRESS DURING THE WAR YEARS

In spite of these war curtailments, we were making progress in studying special aspects of our field. That year facilities at the Harvard Medical School Department of Otology were made available so that Dr. Philip E. Meltzer of our staff could work with Dr. Julius Lempert, well known for his advanced technique in the fenestration operation to relieve deafness due to otosclerosis. Together they conducted a series of experiments with rhesus monkeys to investigate the factors causing osteogenesis of the newly formed fenestra. Studies of the histo-pathological aspects of these experiments were conducted in the Mosher Laboratory with Dr. Dorothy Wolfe engaged to carry on this work.

The following year, 1943, the 12 month residency proved so impractical that resident training was again returned to 24 months. At the request of the Surgeon General of the Army, the Infirmary, in cooperation with the Harvard Medical School, gave four courses of six weeks each in plastic surgery to selected Army medical and dental officers.

When at this time Dr. Richards left for military duty, the bronchoscopic service was placed under the able direction of Dr. John R. Richardson.

Also in 1943, through the generosity of Mrs. Richard Gary Curtis and a grant from the Ladies Visiting Committee, a class for the development of esophageal speech for laryngectomized patients was first established at the Infirmary with Mr. Willard White as instructor.

Looking toward the future, in this 1943 report I made the following recommendations: that our facilities for private patients should be tripled, that a building fund to help with much needed expansions should be set up, and that scholarships should be made available for special training beyond residency. My suggestion was that this training should be of one year's duration in any of the related fields so that after residency a year would be spent in otology, broncho-esophagology, rhinoplastic or tumor surgery, allergy, bacteriology, histopathology or research. Such advanced training, I pointed out, would raise our standards so that in the future the ENT service at the Infirmary would continue to grow in keeping with its fine records of the past.

1944 saw the shortage of personnel still a serious problem and a large percentage of our resident staff was drawn from foreign medical schools, especially from South America.

The pioneer work of the Winthrop Foundation had proved of such interest to Mr. Winthrop that, instead of a yearly grant, he set up at this time an annual budget of \$10,000 to carry on the investigation of medical and surgical treatment of deafness for a 10 year period. Also to augment the work of the Foundation, a Clinic for the Deaf was established through the generosity of Mr. Paul Wilde Jackson and Mr. Neal Rantoul.

When in 1944 Mr. Blake resigned as bacteriologist, Miss Anita Mangiaracine, our present bacteriologist, was secured to replace him.

During the war years the histo-pathological work of the Department of Otolaryngology of the Infirmary was done by the Pathology Department at the Massachusetts General Hospital. In 1945 Dr. Werner Mueller, who from his student days was interested in histo-pathology, was induced to give up his practice and come to the Mosher Laboratory as Pathologist. Today the wisdom of this decision is self-evident; his work has been outstanding not only in service to our staff but also in teaching the histo-pathology of our specialty to the residents.

In 1946 our exhibit of Cancer of the Larynx at the American Academy of Ophthalmology and Otolaryngology won first prize with Mr. White there to explain the exhibit. When shortly there-

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after Mr. White was offered a position of esophageal voice instructor at the National Hospital for Speech Disorders in New York, Mrs. Mary A. Doehler, a laryngectomee in 1944, came to us as an instructor in esophageal speech under a grant from the Massachusetts Division, American Cancer Society.

The end of the war made it possible to increase our residency to 27 months and our resident staff from seven to nine. With the cessation of hostilities most of our staff were back on duty at the Infirmary by 1947.

During 1947 the out-patient clinic was remodelled and the ear clinic was consolidated with the nose and throat to form the present ENT clinic service.

The untimely death of Dr. Guilder (1945) was a severe blow to the Winthrop Foundation, and in 1947 Dr. Meltzer, because of his intense interest in the problems of the deaf, consented to become the director of the Foundation. The next year, 1948, through the generosity of Mr. Winthrop and Dr. Francis L. Weille, the space formerly occupied by the ear clinic and vacated when the clinic consolidation took place, was entirely remodelled into modern quarters for the Foundation with increased facilities for the study of deafness.

MODERNIZATION AND EXPANSION

1949 was a period of extensive reconstruction and modernization throughout the hospital. Our care of the sick was complicated by the remodelling of the semi-private accommodations on the fourth floor, the reconstruction of the operating rooms on both the second and third floors, and the building of the new fifth floor pent-house for private patients. During the operating room reconstruction, all surgery had to be carried on in temporary quarters in the clinic area. The completion in 1950 of these new facilities was greatly appreciated by the entire staff.

During the summer of 1951 the Mosher Laboratory was redesigned. This was made possible through the generosity of Mr. William Francis Keeler of New York who gave funds to convert the large open room into three smaller areas affording more privacy to the technicians.

Until the year 1951 the only library facilities for the Department of Otolaryngology were a dozen standard text books on open shelves in the Mosher Laboratory. This unfortunate state of affairs was alleviated by a rack now made available in the Howe Library for otolaryngological literature.

In 1952 in order to meet the requirements of the American College of Surgeons, the Council on Med-

ical Education of the American Medical Association and the American Board of Otolaryngology, the period of training in otolaryngology was increased to three years, and a recommendation was made to the Board of Managers that the number of residents be increased from nine to 12. At the same time I expressed concern on an important aspect of our residency program. Although it is desirable for this hospital to train young doctors from distant parts, enough well trained young men should be completing our residency to take up practice in otolaryngology here in Boston and in other parts of New England. Never before in our history have better opportunities awaited such men as at present, and the future of the Infirmary will depend on having such qualified specialists settle here to carry on the traditions of this institution.

EAR, NOSE AND THROAT RESEARCH

In the field of ENT research, Dr. George Kelenen, continuing his work on the temporal bone, was now studying the effects of radiation on the internal ear and also the prenatal influence of German measles on the organ of Corti in the early period of its development. Findings on laryngeal stridor were completed and published. In the Virus Research Laboratory, Dr. Robert S. Gohd had expanded his study of the common cold and was investigating the possibilities of isolating the virus in papilloma of the larynx.

Dr. Weille, in cooperation with the Department of Allergy at the MGH and working with Dr. John Irwin, had begun an investigation of the blood supply of the cochlea. Under high magnification he was able to study and also photograph the vascular changes in the stria vascularis due to disease. This primary study of the highest scientific interest may help to solve many of the problems of the vascular changes in the cochlea.

On July 1, 1955, the artificial separation of the diseases of otology and laryngology was terminated at the Infirmary by the consolidation of these two services. This step, long overdue, was made possible by the foresight of the Board of Managers in accepting the recommendation that the resident staff be increased from nine to 12 men. Reorganization permitted the establishment of two service sections, each under its own chief surgeon and with its own corps of residents. Patients coming to the hospital with diseases of the ear, nose or throat are admitted in rotation to either service. This reorganization also helps distribute the work load more evenly.

Also on July 1, 1955, a new system of resident appointments was instituted. In former years a new resident was accepted every four months. Since

graduation from medical school is usually in June, most internships start July first, and under our former system many men were forced to wait up to a year before beginning their training in ear, nose and throat. By appointing four new residents on each July 1, this waiting period has been eliminated. Better training in pediatric otolaryngology was also inaugurated at this time by completing arrangements with the Department of Otolaryngology at the Children's Medical Center whereby our residents rotate through their service for a period of three months each.

The addition in 1956 of three floors for laboratories on top of the Connecting Building provided new quarters for the service laboratories of pathology, chemistry, hematology and bacteriology. A new Microcirculatory Laboratory under Dr. Irwin demonstrated the concern of the Board of Managers in fundamental research in otology. Because of the interest of the Massachusetts Institute of Technology in the humanitarian side of science, the Department of Electrical Engineering under Professor Walter A. Rosenblith entered into an affiliation with Dr. Irwin and the staff at the Infirmary to plan a joint effort in fundamental research on the internal ear.

SHORTAGE OF ENT SPECIALISTS

By 1957 the great shortage of well-trained otolaryngologists was making itself felt in all sections of the country. This shortage received national recognition by the United States Public Health Service, and recent laws have been passed to correct the situation. Under these laws the Surgeon General, with the recommendation of the National Advisory Neurological Diseases and Blindness Council, may make grants of funds to help private non-profit institutions provide graduate training to prospective clinical researchers and teachers in the fields of neurology, ophthalmology and otolaryngology. The purpose of such training grants is to assist schools in increasing the number of specialists available for academic and clinical research careers in fields of interest to the National Institute of Neurological Diseases and Blindness and to aid the schools in improving and developing their training programs in the departments concerned. Our Department of Otolaryngology has been the beneficiary of this act, and two of our residents have completed a fourth year of training, and two recent residents, carefully selected, are now on this training grant program.

Looking to the future, it is our desire to pick one or two graduates each year who will be supported by special grants for additional study with us. We are desirous of furnishing further training in teaching, research and specialized fields in the fourth,

fifth and sixth year after graduation. It would be from these men that we could expect to fill the professorial opportunities now going begging for lack of qualified otolaryngologists.

The liaison with the Massachusetts Institute of Technology has resulted in the construction of the Eaton-Peabody Laboratory of Auditory Physiology. This building, nearing completion in our courtyard, has had to be constructed free from sound and vibration and to be electrically screened. It is under the direction of Prof. Rosenblith, Professor of Communications Biophysics at MIT, with Dr. Nelson Kiang, Mr. Robert Brown, and Mr. Edward Dunlevy working in the laboratory.

The highlight of the past year — 1958, has been the remodelling of the second and third floors. The old large open wards have been replaced by modern, flexible four-bed rooms.

Three shortages at the hospital at the present time pose serious problems for our staff. These are shortage of beds, scarcity of operating time, and the continuing shortage of nurses. The Massachusetts Eye and Ear Infirmary of the future should be of sufficient size and bed accommodation so that the staff members need not search the city and its suburbs for vacant beds for the care of their patients. There is not one member of our staff who would not prefer to operate and care for his patients at the Infirmary. The increased efficiency of doing all his work under one roof is self-evident.

FUTURE NEEDS

Perhaps the hospital of the future will have quarters for doctors' offices so that the entire day can be spent in close proximity to the hospital taking care of both service and private patients. Certainly a hospital in this motor age must have sufficient parking space.

The Infirmary has seen many changes in the course of 20 years. It is only regrettable that we have not, at some time in the past, established a speech center for the aid of those handicapped by speech difficulties.

An even more immediate possibility of service has presented itself. The report of the Committee of the United Community Services of Metropolitan Boston has strongly recommended that a hearing and speech center be established in a medical institution to give otological and audiological guidance to the existing agencies in metropolitan Boston dealing with the problems of hearing and speech. The Massachusetts Eye and Ear Infirmary is the logical place for this center. It is my desire that the

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Board of Managers approve an affiliation with the Department of Speech of Boston University which would furnish the personnel for such a speech center. It would be to the mutual advantage of both Boston University and the Infirmary to form this cooperative project to fill a greatly needed facility.

To my co-workers, the medical staff, the nurses, the administration and to each one who has added to the efficiency of the Infirmary, my sincere thanks for their wonderful cooperation over these last 20 years.

LEROY A. SCHALL, M.D.
Chief of Otolaryngology

Department of Ophthalmology

THERE have been few changes on the ophthalmic staff during the year. We continue to be very fortunate in obtaining excellent residents, who are chosen about two years ahead of time. We are now booked up until January 1961.

Remodeling is in progress in the Clinic Department in order to make a screening area for new patients, so that they may be handled more efficiently. Several partitions have been torn down and it is anticipated that the flow of new patients through the Eye Clinic will proceed smoothly without the delays necessitated in moving them from one subdivision to another. Miss Oleta Allen, R.N., head nurse, is assisted by Mrs. Elizabeth Ward, R.N. The number of Clinic patient visits is reported as 43,880 for the year.

Dr. Albert E. Sloane, Director of the Refraction Department, reports 9,075 refractions; an increase of 452 over last year. Approximately 50% of the load is carried by the residents and the remainder by our two full-time refractionists, Miss Thelma Farmer, R.N., and Mr. Roland Blanchard. The trial set of contact lenses provided by the Boston Aid to the Blind has arrived and the residents are being instructed in some of the techniques of contact lens fitting. This same organization also provided, a few years ago, a number of sub-normal visual aids for those people who cannot be improved by regular glasses. The use of these aids is becoming increasingly popular.

SPECIAL SERVICES

The other subdivisions of the Eye Clinic continue to be very busy. Miss Ann Stromberg, our orthoptist, has had two students enrolled for a one year course. The department has recorded 6,492 patient visits during the year.

Dr. Garrett Sullivan, in charge of the Perimetry Room, reports 1,247 visual field examinations performed.

The Glaucoma Consultation Service saw 1,820 patients, a further increase over last year. Enlarged quarters were necessary for the rapid growth of this new service and these were provided by re-shuffling and consolidating certain other activities in the Eye Clinic. The Tension Room is now adjacent to and part of the Glaucoma Consultation Service, which has acquired in addition two small examining rooms for tonography and gonioscopy. New equipment has been provided through funds under the control of Dr. Paul Chandler. The residents continue to rotate through this service and it is a pleasure to report that they have produced three papers, with the help of Dr. Pei-Fei Lee, based on the clinical evaluation of certain new anti-glaucoma drugs. Dr. Lee has been a valuable assistant to Dr. Robert Trotter in the development of this new service.

In May 1958, a one week glaucoma course for practicing ophthalmologists was given by Dr. Trotter and Dr. Lee, aided by Dr. Chandler, Dr. W. Morton Grant, Dr. David D. Donaldson, Dr. Alfred W. Scott, Dr. Baruch Sachs and Dr. Donald Tucker. Twelve ophthalmologists attended from various parts of the U. S. A. and more than enough applicants have already applied to fill a similar course this year.

The growing prestige of the Retina Service, under the leadership of Dr. Charles Schepens, is attested to by the fact that more and more institutions send certain of their young ophthalmologists here for special training in the new techniques of examination and surgery of retinal detachments. In addition to these special fellows, who come for a year, there are a number of members of our active staff who rotate through this service in order to make themselves more efficient in this field of ophthalmology. Clinical research has been considerable and will be described in the section on Retina Foundation.

Not only in the Clinic but also in the House there has been an increase of patient load: 4,344 eye

patients were admitted, of which 4,050 were operated upon. These figures include private as well as service patients.

A new laboratory for electroretinography has been set up in the research section. Dr. Benjamin Ziv, who has received special training in this field through a fellowship given by the Massachusetts Lions Clubs, is in charge. New equipment has been provided by the Retina Foundation. Dr. Ziv plans to study the electrical responses from the retina in a number of conditions. Electroretinography is something that the Infirmary has felt the need of for some time.

The Boston Eye Bank has had its most productive year under its new executive secretary, Miss Nancy Hunt. Ten thousand New Englanders are now registered as potential donors. Ninety-eight hospitals are affiliated with the program. One hundred eighty-six eyes were received, which were used either for corneal transplants or research, the former having priority. Thanks are due to the Red Cross, the airlines and the railroads for their co-operation in transportation and to the Charles Irwin Travelli Fund for important financial aid.

The Adolph Erhlich Eye Pathology Laboratory examined 562 specimens during the year, of which 370 were biopsies and 192 whole eyes. Dr. Taylor Smith conducts his weekly pathologic conferences, which are attended by the residents, fellows in pathology and by some of the staff. Several young ophthalmologists have been sent by other institutions to study with Dr. Smith.

Research activities of the Porter Bacteriological Laboratory during the past year have been directed to continued evaluation of aseptic procedures and sterilization techniques. Various types of fibrous air filters have been tested for their retention of bacteria. The vacuum cleaner used in the Infirmary has been analyzed for its ability to remove staphylococci from the air and has been found to have an efficiency approaching 100% against air-borne organisms. The newer gaseous sterilants, ethylene oxide and beta propiolactone, are under evaluation for purposes of sterilizing optical instruments, plastics and blankets. Routine sterility surveys of eye operations and the operating rooms have been conducted at regular intervals. The laboratory has collaborated with the Hospital Infections Committee, the central supply room, the housekeeping department, in addition to the nursing and operating room staffs, on all phases of hospital hygiene and reduction of environmental contamination.

The Howe Library of Ophthalmology had increased attendance with 6,493 patrons this past year, an increase of 405 over 1957. The total number of textbooks, bound journals and pamphlets is now

6,154. Mr. Charles Snyder, the librarian, has been most helpful in assisting members of the staff looking up references for their publications.

The Occupational Therapy Department, directed by Miss Mary Ellen Hill, has been most helpful in rendering service to house cases. During the year, 515 new eye patients were referred and a total of 3,292 treatments given them. This service is very important to those individuals who must spend long hours deprived temporarily of the use of their eyes.

HOWE LABORATORY

The Howe Laboratory's activities of the past year have been in part a continuation of long term investigations and in part an exploration of new fields. In the former category are Dr. Morton Grant's studies on ocular hydrodynamics and glaucoma.

Studies on fat metabolism in the eye and other tissues continue to be the chief interest of Drs. Cogan and Kuwabara. The general implications of these studies were summarized in a recent Lowell Lecture. Chemical identification of the fat found has been partially accomplished by Drs. Kevin Hill, Eugene Ciccarelli and Jin Kinoshita.

With the aim of contributing to the understanding of cataracts, the biochemical section of the laboratory, directed by Dr. Kinoshita, has further elucidated the role of glutathione and other sulfhydryl compounds in lens metabolism.

An entirely new addition to this year's research is the study of dehydrogenases in the retina. This resulted from the development of a technique which permits the histochemical detection of minute amounts of these important enzymes. It is hoped to localize the source of energy in the retina under normal and abnormal conditions.

Many other investigations of the Laboratory, described in more detail in the special Annual Report of the Howe Laboratory, may be listed here only by title: neuro-ophthalmic studies, including special observations on Tay-Sachs disease; opticokinetic responses; correlation of gonio-photographs with microscopic anatomy of the infantile angle structure; and the development of the new electronic tonometer.

The Laboratory continues to participate heavily in the teaching of the Basic Science Course, the residents' training program and special demonstrations to the staff. A new feature is the introduction of teaching rounds once a month, in which interesting cases of neuro-ophthalmic interest are demonstrated.

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RETINA FOUNDATION

The research laboratories of the Retina Foundation have continued their activities in the field of connective tissue. The center of interest has been the chemical structure and the metabolism of the extracellular substance, using primarily the vitreous body, the synovial fluid, the rooster comb and hyaline cartilage as the biological systems of investigation. Considerable progress was made toward a better understanding of the metabolism of the vitreous body by the finding that the cells in the cortical layer of the vitreous body are at least partially responsible for the formation and maintenance of this tissue.

The biological importance of hyaluronic acid was studied in the above-mentioned tissues, with special regard to the possibility that this large molecule may form diffusion barriers, thereby compartmentalizing the extracellular space.

In the Fine Structure Laboratory, electron microscope studies were extended from the cornea to the zonular fibers, the lens capsule and the lens itself.

During the past year, a new basic research laboratory has been organized for the study of nuclear magnetic and electron spin resonance. These relatively new physical tools offer a new approach to many biochemical and biological problems, such as the hydration of macromolecules and tissues, the effect of radiation on tissues and the chemical structure and interaction of biologically important molecules.

The activities of the Retina Foundation in clinical research have been concentrated in three areas.

In the field of retinal detachment, the relation between this disease and glaucoma has been further investigated on the Retina Service. Another study was the clinical isolation of a new entity consisting of bilateral retinal detachment without retinal breaks and increased intracranial pressure without signs of either intracranial tumor or inflammation.

As a result of several years of effort, a new crystal-controlled radio-frequency diathermy machine has been developed for ophthalmological use. Experience shows that it is a great improvement over existing models. A sterilizing device for ophthalmological instruments was also developed.

Dr. Ernst Wolf has continued his studies of retinal sensitivity, with particular emphasis on the sensitivity of the detached and the surgically reattached retina.

Dr. Schepens, Dr. Balazs, Dr. Brockhurst, Dr. Okamura and Dr. Wolf continue to participate in the Basic Science Course given by the Department of Ophthalmology, Harvard Medical School.

OPHTHALMIC PLASTICS LABORATORY

This laboratory, under the direction of Dr. William Stone, Jr., has studied the phosphorus metabolism of the cornea in relation to wound healing. The uptake of radioactive phosphorus in the rabbit cornea has been compared to other parts of the rabbit eye over a two week period. Extraction studies are in progress to determine the fractions in which the phosphorus is incorporated.

The ratio of urea and a trimethylamine oxide in the aqueous and plasma of teleosts and elasmobranchs has been investigated. This study was started because of the exaggerated systems of water balance which exist in elasmobranchs. The urea in the plasma of elasmobranchs is 100 times the concentration of that in mammals. It was found that the total CO_2 of the aqueous as compared to the plasma was higher than any species thus far reported. Further study may indicate some changes in the theories of formation of aqueous. The work was started at the Marine Biological Laboratory at Woods Hole and is being continued during the winter at this laboratory.

The study of the plastic artificial cornea is continuing. It has remained in a rabbit cornea for over four years as of the present time. It is now being placed in Dorocouli monkey corneas, and studies on scarred corneas are in progress.

The use of metals and plastics as drains in glaucoma is being investigated. Dr. John Sebestyen is conducting this study in rabbit and monkey corneas. Estimation of facility of outflow and reaction to the materials is in progress.

Changes have been made on the pilot model of the remote control surgical operating slit lamp. Innovations making possible gonioscopic examinations and also gonioscopic operations are in progress.

Various new types of post-enucleation implants have been fashioned and tried in patients.

Over one hundred prostheses were made for service and private patients in the past year. Various reconstructive procedures for maintaining sockets have been developed.

RETROLENTAL FIBROPLASIA RESEARCH

Dr. Leona Zacharias, aided by Dr. Julian Chisholm, Jr., and Dr. Richard Chapman, is continuing her follow-up study of mild and severe retrolental fibroplasia. This study is now in its fifth year. No more infants will be included after the close of 1958. The project will then concern itself with the collection of data on the infants already in the project,

and the statistical analysis of this data, with the co-operation of the Department of Preventive Medicine of the Harvard Medical School.

Greater understanding of the mechanism of many disorders of the eye, retrolental fibroplasia among them, depends on a fuller knowledge of retinal metabolism and the chemical pathways involved. Dr. Sidney Futterman's work, in collaboration with Dr. J. H. Kinoshita of the Howe Laboratory, so far has been concerned with one particular aspect of retinal metabolism, i. e., respiration (the utilization of oxygen by the tissues while carrying out metabolic processes).

This research during the past year has led to various findings, which are of interest in the general study of retinal metabolism in that they help to elucidate major metabolic pathways of the retina. They are especially interesting in a study of the mechanism whereby excess oxygen gives rise to retrolental fibroplasia, since oxygen is known to be an inhibitor of glycolysis. Retinal tissue exhibits this oxygen-inhibition (Pasteur effect) more prominently than most other tissues.

EDWIN B. DUNPHY, M.D.

Chief of Ophthalmology



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TROTTER, Robert R. and Stromberg, A. E., "An Improvement on the After-Image Test." Am. J. Ophth. 46:71-74, July 1958.

Trotter, Robert R. (See LEE, Pei-Fei.)

TUCKER, Donald P., "Injudicious Use of Steroid-Containing Eye Drops." New England J. Med. 258:946-947, May 8, 1958.

VERHOEFF, Frederick H., "A Case of Ligneous Conjunctivitis now 36 Years in Duration." Am. J. Ophth. 45:246-251, April (pt. II) 1958.

Wolf, Ernst (See ZIGLER, M. J.)

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ZIV, Benjamin, "A New Contact Lens for Recording the ERG in Rabbits." A.M.A. Arch. Ophth. 59:466-468, March 1958.

Directory

MEMBERS OF INFIRMARY STAFF, ALUMNI AND RESIDENTS



Names of members of the Infirmary Staff are printed in capital letters.

Abbreviations following the name indicate to what service of the Infirmary the individual belongs:

Anes.; Anesthesiology

Laryn.; Otolaryngology

Bron.; Bronchoscopy

Oph.; Ophthalmology

Esoph.; Esophagoscopy

Otol.; Otology

Letters in small type preceding the abbreviations indicate the special work of the individual:

a.; assistant

dir.; director

assoc.; associate

elect. eng.; electronics engineer

audiol.; audiologist

fel.; fellow

biochem.; biochemist

path.; pathologist

biol.; biologist

r.; resident

c.; chief of service

roent.; roentgenologist

cons.; consulting

s.; surgeon

s.p.o.; surgeon for plastic operations

As of March, 1959

ADAMS, SAMUEL T., Oph. 1951

1610 Pine Ave. W., Montreal, Que., Canada

ALBAUGH, CLARENCE H., Oph. 1940

727 W. 7th, Los Angeles, Cal.

ALEXANDER, SEYMAN L., Aural 1919

170 St. George, Toronto, Ont., Canada

ALLEN, HENRY F., (a.s. Oph.) , Oph. 1949

200 Beacon, Boston, Mass.

ALLEN, JOHN H., Aural 1904

32 Deering, Portland, Me.

ALLMAN, CHARLES H. (cons. s. Laryn.) ,

Laryn. 1930

520 Commonwealth Ave., Boston, Mass.

ALPERT, D. ROBERT (a. Oph.)

1101 Beacon, Brookline, Mass.

ANGELINI, HUGO D. (a. Laryn.) , Laryn. 1951

3 Seaward Rd., Wellesley Hills, Mass.

ANTHONY, ALAN R., Oph. 1936

736 Granville, Vancouver, B. C., Canada

ANTHONY, MARC, Oph. 1929

508 Old Nat'l. Bank Bldg., Spokane, Wash.

ARSLAN, HIMLI (res. assoc. Otol.)

Sanborn Co., 175 Wyman, Waltham, Mass.

AYASH, JOHN J., Laryn. 1946

119A Main South, Minot, N. D.

BAHN, GUSTAV C., Oph. 1948

921 Canal, New Orleans, La.

BAIR, HUGO L., Oph. 1932

102 Second Ave. S. W., Rochester, Minn.

BALAZS, ENDRE A. (biochem. & assoc. dir. Ret. Fd.)

30 Chambers, Boston, Mass.

BALLINGER, JOHN J., Laryn. 1943

636 Church, Evanston, Ill.

BARTON, RICHARD T., Laryn. 1945

9730 Wilshire Blvd., Beverly Hills, Cal.

BASSEN, EDWARD J., Oph. 1928

70 E. 66th, N. Y. C.

BAUER, FREDERICK, Aural 1902

BECHTEL, EDWARD J., Oph. 1957

419 N. Newport Blvd., Newport Beach, Cal.

BECK, PETER (a. Oph.) , Oph. 1954

43 Austin, Portsmouth, N. H.

ONE HUNDRED AND THIRTY-SECOND ANNUAL REPORT

BEETHAM, WILLIAM P. (s. Oph.) , Oph. 1929
108 Bay State Rd., Boston, Mass.

BIRDSELL, CLARENCE H., Aural 1916, Oph. 1918
26 Summer, Haverhill, Mass.

BLACK, DANIEL E., Laryn. 1944
174 Main, Nashua, N. H.

BOBBETT, GORDON H., Laryn. 1948
161 W. Cheeves, Florence, S. C.

BOGAN, FREDERICK L. (cons. s. Laryn.) ,
Aural 1908
112 Stratford Rd., W. Roxbury, Mass.

BOIES, LAWRENCE R., Laryn. 1931
90 S. 9th, Minneapolis, Minn.

BORUCHOFF, S. ARTHUR (a. Oph.)
192 Bay State Rd., Boston, Mass.

BRACONIER, HARRY E. (a. s. Oph.) , Oph. 1945
1180 Beacon, Brookline, Mass.

BRADY, FRANK W., Laryn. 1942
8 Merrimac, Lowell, Mass.

BRANCO, ADOLFO, Laryn. 1958
Lemper Institute, 119 E. 74th, N. Y. C.

BREED, FREDERIC B. (a.s. Oph.) , Oph. 1950
2 Winter, Salem, Mass.

BREWER, DAVID W., Laryn. 1948
1100 E. Genesee, Syracuse, N. Y.

BROCKHURST, ROBERT J. (a.s. Oph.) ,
Oph. 1951
99 W. Cedar, Boston, Mass.

BROWN, LESTER A., JR., Laryn. 1937
478 Peachtree, Atlanta, Ga.

BROWN, ROBERT M. (elect. eng. Otol.)
M.I.T., Cambridge, Mass.

BRYAN, BURTON D., Laryn. 1943
151 Rock, Fall River, Mass.

BULLINGTON, S. JAMES (a. Oph.) , Oph. 1956
1180 Beacon, Brookline, Mass.

BURKE, J. ROBERT, Oph. 1918, Aural 1919, Retired
465 Eighth Ave., N.E., St. Petersburg, Fla.

BURRAGE, WALTER (res. assoc. Otol.)
330 Dartmouth, Boston, Mass.

CALNAN, ARTHUR F. (a. Oph.)
534 Beacon, Boston, Mass.

CAMERON, WALTER C., Oph. 1930
740 St. Helens Ave., Tacoma, Wash.

CANDRAY, CARLOS H., Oph. 1944
San Salvador, El Salvador, C. A.

CARON, ARMAND L., Laryn. 1927
Medical Arts Bldg., Worcester, Mass.

CARROLL, FRANK D., Oph. 1935
635 W. 165th, N. Y. C.

CARROLL, WALTER J. E. (s. Laryn.)
5 Chestnut, Arlington, Mass.

CARTER, LELAND F., Oph. 1926
1553 Woodward Ave., Detroit, Mich.

CASE, PAUL H., Oph. 1938
550 W. Thomas Rd., Phoenix, Ariz.

CASTELLANOS, CARLOS A. (r. Laryn.)

CASTEN, VIRGIL G. (s. Oph.) , Oph. 1931
412 Beacon, Boston, Mass.

CAVANAUGH, THOMAS (a.s. Oph.) , Oph. 1940
403 Commonwealth Ave., Boston, Mass.

CAVE, LINUS S., Laryn. 1927
129 W. Borden Ave., Syracuse, N. Y.

CERRATO, CALVIN M., Laryn. 1944

CHAMBERLAIN, CALVIN B., Oph. 1944
174 Nemaha, Pomona, Cal.

CHANDLER, PAUL A. (cons. s. Oph. & assoc.
dir. Oph. r. training) , Oph. 1925
5 Bay State Rd., Boston, Mass.

CHAPMAN, RICHARD B. (a. Oph.) , Oph. 1955
743 High, Dedham, Mass.
32 Greenleaf, Quincy, Mass.

CHISHOLM, JULIAN F., JR., (a.s. Oph.)
330 Dartmouth, Boston, Mass.

CICCARELLI, EUGENE C. (fel. Oph.)

CLARKE, SAMUEL T., Oph. 1939
130 N. Virginia, Reno, Nev.

CLARK-ROBERTS, PEGGY JOAN (fel. Anes.)

CLOUGH, JOSEPH M. (a.s. Oph.) , Laryn. 1939,
Oph. 1941
266 Beacon, Boston, Mass.

CLUBB, ROBERT W. (r. Laryn.)

COGAN, DAVID G. (s. Oph. & dir. Howe Lab.) ,
Oph. 1935
243 Charles, Boston, Mass.

COGAN, JAMES R., Oph. 1944
414 N. Camden Dr., Beverly Hills, Cal.

COLLINS, CLARK S. (r. Laryn.)

CONTRERAS, JOEL (fel. Oph.)

CONVERSE, JOHN M., Laryn. 1938
722 Park Ave., N. Y. C.

COOPER, KEMP G., Laryn. 1940
3705 E. Colfax Ave., Denver, Colo.

CORDRAY, DAVID P., Laryn. 1940
350 N. Milwaukee Ave., Libertyville, Ill.

COVITZ, EDWARD E. (a. s. Oph.)
475 Commonwealth Ave., Boston, Mass.

COYLE, JOHN A., Oph. 1931
Norwich, Vt.

CREWSON, ARTHUR L., Laryn. 1927
132 Second, W. Cornwall, Ont., Canada

CRIST, ALAN (elect. eng. Otol.)

MASSACHUSETTS EYE AND EAR INFIRMARY

CRONIN, THOMAS P. (a. s. Oph.) , Oph. 1950
 94 Pleasant, Arlington, Mass.
 270 Commonwealth Ave., Boston, Mass.

CUNHA, SERGIO L. (fel. Oph.)

DAVIDSON, HERMAN P., Oph. 1920

DAY, KENNETH, Laryn. 1924
 121 University Pl., Pittsburgh, Pa.

DEAN, ABBOTT M., Oph. 1929
 536 First Ave., Council Bluffs, Iowa

DEBLOIS, ELIZABETH (a. s. Laryn.)
 247 Commonwealth Ave., Boston, Mass.

DIPIERO, RANIERO (fel. Anes.)

DIETRICH, HERBERT J., Laryn. 1951
 2035 Delancy Place, Philadelphia 3, Pa.

DOHLMAN, CLAES-HENRIK (fel. Oph.)

DONAHUE, HUGH C. (assoc. s. Oph.) , Oph. 1931
 520 Commonwealth Ave., Boston, Mass.

DONALDSON, DAVID D. (a. Oph.) , Oph. 1953
 243 Charles, Boston, Mass.

DONOGHUE, WILLIAM F., Laryn. 1942, Oph. 1944
 69 Chestnut, Springfield, Mass.

DOWLING, JOSEPH L., JR. (a. Oph.) , Oph. 1957
 207 Waterman, Providence, R. I.

DOWLING, JOSEPH L., SR., Oph. 1918
 207 Waterman, Providence, R. I.

DOYLE, SAMUEL C., Laryn. 1957
 20 Occom Ridge, Hanover, N. H.

DROOKER, J. CHARLES (assoc. s. Laryn.) ,
 Laryn. 1939
 285 Commonwealth Ave., Boston, Mass.

DRURY, DANA W., Aural 1906
 Sanderson Rd., Littleton, Mass.

DUCLOS, GASTON N., Laryn. 1943, Oph. 1945
 1538 Sherbrooke, W. Montreal, Que., Canada

DUNPHY, EDWIN B. (c. Oph.) , Oph. 1923
 243 Charles, Boston, Mass.

EASTON, MAHLON T. (s. Oph.) , Oph. 1936
 1180 Beacon, Brookline, Mass.

ERNLUND, CARL H. (cons. s. Laryn.) ,
 Laryn. 1927
 5 Bay State Rd., Boston, Mass.

EVANS, MAURICE G. (s. Laryn.) , Laryn. 1928
 416 Marlborough, Boston, Mass.

EVANS, WILLIAM H., Oph. 1924
 16 Wick Ave., Youngstown, Ohio

FARRELL, JAMES I., Oph. 1932
 301 Kempf Bldg., Utica, N. Y.

FILMER, GEORGE A., Oph. 1939
 227 16th, Denver, Colo.

FINK, ROBERT J., Oph. 1955
 133 Hawthorne Rd., Hopkins, Minn.

FISHER, STANWOOD E., Aural 1909
 338 Spring, Portland, Me.

FLOYD, PAUL E., Oph. 1946
 2 Middle, Farmington, Me.

FOOTE, CHARLES M., Oph. 1940
 412 N. Hastings Ave., Hastings, Neb.

FRACKLETON, RALPH J., Laryn. 1933
 15701 Detroit Ave., Lakewood, Ohio

FRAME, STUART M., Laryn. 1956
 216 Alexander, Rochester, N. Y.

FRANKLIN, C. RAY, Oph. 1931
 10 E. 90th, N. Y. C.

FRAZEE, JOHN R. (s. Laryn.) , Laryn. 1925
 1180 Beacon, Brookline, Mass.
 743 High, Dedham, Mass.

FRED, GUSTAVE B. (cons. s. Laryn.) , Laryn. 1925
 520 Beacon, Boston, Mass.

FREEMAN, SUMNER L. (r. Laryn.)

FREESE, CARL GATES, JR., (a. Oph.) ,
 Oph. 1958
 328 Washington, Wellesley Hills, Mass.

FRIEDMAN, EPHRAIM (r. Oph.)

FULTZ, WILLIAM E., Oph. 1927
 Glace Bay, N. S., Canada

FUTTERMAN, SIDNEY (biochem.)

GABRIELS, JOSEPH A. D., Oph. 1921
 481 Western Ave., Albany, N. Y.

GAUDREAU, HONORE E., Oph. 1930
 293 Bridge, Springfield, Mass.

GAY, ANDREW J., JR. (fel. Oph.)

GEHRING, JOHN R. (r. Oph.)

GERMAIN, HARRY H., Oph. 1899
 479 Commonwealth Ave., Boston, Mass.

GIFFORD, HAROLD, JR., Oph. 1934
 1620 Medical Arts Bldg., Omaha, Neb.

GILBERT, JOHN J., Oph. 1917, Aural 1920
 209 Angell, Providence, R. I.

GILLER, HERBERT, Oph. 1952
 2040 W. Wisconsin Ave., Milwaukee, Wis.

GILLESPIE, ELMER H., Laryn. 1932
 906 So. Fort Harrison Ave., Clearwater, Fla.

GINSBERG, JOSEPH, Oph. 1953
 3115 Burnet Ave., Cincinnati, Ohio

GODUTI, RICHARD J., Oph. 1946
 704 Congress, Portland, Me.

GOHD, ROBERT S. (res. vir.)
 243 Charles, Boston, Mass.

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GOLDCAMP, RICHARD R., Laryn. 1948
16 Wick Ave., Youngstown, Ohio

GOLDMAN, A. MILTON, Oph. 1924
Rockville, N. Y.

GOODALE, ROBERT L. (cons. s. Laryn.) ,
Laryn. 1926
330 Dartmouth, Boston, Mass.

GOODALL, EDWIN B. (a. s. Oph.) , Oph. 1952
328 Washington, Wellesley Hills, Mass.

GOODELL, WILLIAM, Aural 1906
Halladay Ave., Suffield, Conn.

GOTLIB, BERNARD N. (r. Laryn.)

GRANT, W. MORTON (a. s. Oph.)
243 Charles, Boston, Mass.

GRAY, GERALD H., Laryn. 1929
418 Thirtieth, Oakland, Cal.

GRIFFEY, LOUIS E. (a. Laryn.) , Laryn. 1957
53 W. Central, Natick, Mass.

GUIMARAES, JOAO C., Laryn. 1946
Rua David Campista 67, Botafogo, Rio,
Brazil, S. A.

GULICK, ROBERT P. (r. Laryn.)

GUNDERSEN, TRYGVE (s. Oph.) , Oph. 1930
534 Beacon, Boston, Mass.

HACKING, RAYMOND F., Oph. 1927
105 Waterman, Providence, R. I.

HAKIM, ARCADIUS, Laryn. 1954
U. S. Naval Dispensary, Washington, D. C.

HALEY, WARREN D. (a. s. Oph.) , Oph. 1950
78 Church, Winchester, Mass.

HALTON, EDWARD J., Laryn. 1942
337 Appleton, Holyoke, Mass.

HAPP, LINLEY C. (a. s. Oph.) , Laryn. 1931
Oph. 1943
170 Waterman, Providence, R. I.
502 Newport Ave., Pawtucket, R. I.

HARDENBERGH, FIRMON E. (r. Oph.)

HAYDEN, WILLIAM (r. Laryn.)

HEATH, PARKER (cons. s. Path.)
Sullivan Harbor, Me.

HEINE, LYMAN H., Laryn. 1927
635 N. Main, Freemont, Neb.

HEINICKE, HORST J., Laryn. 1948
116 W. Buffalo, Ithaca, N. Y.

HENNESSEY, WILLIAM W., Aural 1908
33 Essex, Salem, Mass.

HENRY, MORRISS M. (r. Oph.)

HERM, ROBERT J. (a. Oph.) , Oph. 1955
740 Main, Waltham, Mass.

HERMAN, EDWARDS W. (cons. s. Laryn.)
Lincoln, Mass.

HICKS, JULIUS N. (r. Laryn.)

HILL, FREDERICK T., Aural 1916
111 Main, Waterville, Me.

HILL, JOHN M. (a. s. Oph.)
108 Bay State Rd., Boston, Mass.

HILL, KEVIN (r. Oph.)

HIRSCH, LAWRENCE S. (a. Laryn.)
42 Lincoln, Framingham, Mass.

HO, ALBERT K. T., Laryn. 1949
Central Medical Bldg., Beretania & Kalakaua,
Honolulu, T. H.

HOBART, CARL, Oph. 1922
3601A Gravois Ave., St. Louis, Mo.

HOLLABAUGH, CHARLES F., Oph. 1932
1915 Church, Nashville, Tenn.

HOLMES, EDGAR M. (s.p.o.) , Laryn. 1934
330 Dartmouth, Boston, Mass.

HOLT, LAWRENCE B., Oph. 1948
208-209 Reynolds Bldg., Winston-Salem, N. C.

HOOPLE, GORDON D., Laryn. 1926
1100 E. Genessee, Syracuse, N. Y.

HOUSTON, G. GILBERT, Laryn. 1938
170 Fitzroy, Charlottetown, P. E. I., Canada

HOWARD, DONALD O., Oph. 1941
201½ N. Main, Wichita, Kan.

HURLEY, PAUL D. (a. Oph.)
270 Commonwealth Ave., Boston, Mass.

HURST, ALFRED L. (r. Laryn.)

IRELAND, PERCY E., Laryn. 1935
170 St. George, Toronto, Ont., Canada

IRGENS, EDWIN R., Laryn. 1938
519 Ship, St. Joseph, Mich.

IRVINE, A. RAY, JR., Oph. 1947
9730 Wilshire Blvd., Beverly Hills, Cal.

IRVINE, A. RODMAN, Oph. 1935
9730 Wilshire Blvd., Beverly Hills, Cal.

IRVINE, WENDELL, Oph. 1941
2010 Wilshire Blvd., Los Angeles, Cal.

IRWIN, JOHN W. (dir. Micro-Circ. lab &
dir. Auditory Physiology lab)
243 Charles, Boston, Mass.

JAKO, GEZA (fel. Laryn.)

JAKUS, MARIE (biol.)

JESBERG, DAVID O. (fel. Oph.)

JESBERG, NORMAN, Laryn. 1947
Eye & Ear Hospital, 500 S. Lucas Ave.,
Los Angeles, Cal.

EWETT, EVERETT P., Oph. 1945
65 Elm, Worcester, Mass.

MASSACHUSETTS EYE AND EAR INFIRMARY

JOHNSON, CARL C. (a. s. Oph.) , Oph. 1942
5 Bay State Rd., Boston, Mass.

JOHNSON, DAVID S., Oph. 1956
Hauser Clinic, 7411 Third Ave., Detroit, Mich.

JOHNSON, LOUIS L. (r. Oph.)

JOHNSON, LORAND V., Oph. 1937
10515 Carnegie Ave., Cleveland, Ohio

JONES, EDWARD E., Laryn. 1928
141 Elm, Brockton, Mass.

JUDD, DELBERT K., Laryn. 1934
187 S. Schuyler Ave., Kankakee, Ill.

JUNGSCHAFFER, OTTO (fel. Oph.)

KANT, ALFRED, Oph. 1948
40 Public Square, Watertown, N. Y.

KAZANJIAN, KENNETH A. (a. s. Laryn.)
475 Commonwealth Ave., Boston, Mass.

KAZANJIAN, VARAZTAD H. (cons. s.p.o.)
475 Commonwealth Ave., Boston, Mass.

KELEMEN, GEORGE (res. assoc.)
20 Gloucester, Boston, Mass.

KELLEY, VINCENT J. (s. Laryn.)
520 Commonwealth Ave., Boston, Mass.

KENNEALLEY, ELMER V., Oph. 1952
479 Main, Greenfield, Mass.

KENNEDY, MICHAEL F., Oph. 1927
1835 I, N.W., Washington, D. C.

KENT, CHARLES (a. s. Laryn.)
270 Commonwealth Ave., Boston

KERN, HAROLD (biochem.)

KERST, J. ARTHUR, Oph. 1934
1211 S. 6th, Springfield, Ill.

KIANG, NELSON Y. (res. a. Otol.)

KING, DAVID G., Laryn. 1951
605 Commonwealth Ave., Boston, Mass.

KING, MERRILL J., JR., Oph. 1956
22 White, Rockland, Me.

KING, MERRILL J., SR., (cons. s. Oph.) ,
Oph. 1932
22 White, Rockland, Me.

KINOSHITA, JIN H. (biochem.)

KLOTZ, ROBERT E. (a. Laryn., a. to c. Laryn.
& a. s. Winthrop Fd.) , Laryn. 1956
243 Charles, Boston, Mass.

KOCH, ALBERT E. (audiol.)

KOS, CLAIRE M., Laryn. 1941
University Hospital, Iowa City, Iowa

KUPFER, CARL (a. Oph.)
243 Charles, Boston, Mass.

KUWABARA, TOICHIRO (assoc. Oph. path.)
243 Charles, Boston, Mass.

LANE, CHARLES S., Laryn. 1949
1214 N. B., Fort Smith, Ark.

LANGWORTHY, HENRY G., Aural 1907
394 W. 10th, Dubuque, Iowa

LA PIERRE, WARREN W., Oph. 1948
32 Clinton Ave., Norwichtown, Conn.
10 Shetucket, Norwich, Conn.

LAVOIE, ROLAND, JR., Laryn. 1950
3 Claire Fontaine, Quebec City, Que., Canada

LAWLOR, ROBERT C. (r. Oph.)

LEAHEY, BRENDAN D. (s. Oph.) , Oph. 1933
9 Central, Lowell, Mass.

LEAVELLE, ROBERT B., Oph. 1953
4747 Vineland Ave., N. Hollywood, Cal.

LECONTE, CHARLES M., Laryn. 1947
Rue Royale, Cap-Haitien, Haiti

LEE, PEI-FEI (fel. Oph.)

LEMOINE, ALBERT N., JR., Oph. 1945
4620 J. C. Nichols Pkwy., Kansas City, Mo.

LENTINE, JOSEPH (assoc. s. Laryn.) , Laryn. 1935
15 Bay State Rd., Boston, Mass.

L'ESPERANCE, FRANCIS A., JR. (r. Oph.)

LEVITT, JESSE M., Oph. 1933
515 Ocean Ave., Brooklyn, N. Y.

LEWIS, DONALD K. (assoc. s. Laryn., assoc. s.
Winthrop Fd.) , Laryn. 1943
243 Charles, Boston, Mass.
15 Dix, Winchester, Mass.

LIEBMAN, SUMNER D. (a. s. Oph.) , Oph. 1943
115 Bay State Rd., Boston, Mass.
39 Elm, Southbridge, Mass.

LILLY, JOHN S., Laryn. 1951
215 E. Columbus, Kenton, Ohio

LINCOFF, WILLIAM, Oph. 1954
302 E. 9th, Chester, Pa.

LINEBACK, MERRILL I., Laryn. 1952
219 W. Georgia Ave., College Park, Ga.

LINGEMAN, BYRON S. (r. Oph.)

LODGE, EDMUND A., Laryn. 1924
24 Pleasant, Gloucester, Mass.

LOTHROP, OLIVER A., Aural 1911
91 Neshobe Rd., Waban, Mass.

LOUGEE, JOHN L., Aural 1909
195 St. Paul, Brookline, Mass.

LOVELY, DAVID K., Laryn. 1946
73 Deering, Portland, Me.

ONE HUNDRED AND THIRTY-SECOND ANNUAL REPORT

LOVESY, BURTON E., Laryn. 1935
15 W. Central, Natick, Mass.

LOZANO, DAVID (fel. Oph.)

LURIE, MOSES H. (cons. s. Laryn.,
dir. Laryn. Res.)
483 Beacon, Boston, Mass.

LYNCH, MERCER G., Laryn. 1936
3503 Prytania, New Orleans, La.

MACDONALD, ALEXANDER E., Oph. 1923
421 Medical Arts Bldg., Toronto, Ont., Canada

MACDONALD, DONALD H., Laryn. 1930
VA Hospital, Augusta, Ga.

MACHAMER, R. WENNER, Laryn. 1945
2060 E. Ninth, Cleveland, Ohio

MACKENZIE, ROLAND C., Oph. 1911
30 Grant, Waltham, Mass.

MACLAUGHLIN, CHARLES H. (a. s. Oph.),
Oph. 1947
834 Broadway, Everett, Mass.

MACMILLAN, ALEXANDER S., JR. (a. roent.)
483 Beacon, Boston, Mass.

MACMILLAN, ALEXANDER S., SR. (roent.)
483 Beacon, Boston, Mass.

MACMILLAN, ANDREW L., JR., Aural 1912
46 Pleasant, Concord, N. H.

MACNIE, JOHN P., Oph. 1929
635 W. 165th, N. Y. C.

MALKOFF, JACK, Laryn. 1955
1105 Belmont Ave., Youngstown, Ohio

MANCALL, IRWIN T. (a. Oph.), Oph. 1952
750 Main, Hartford, Conn.

MANGIARACINE, ANITA (bact.)
243 Charles, Boston, Mass.

MARFEY, S. PETER (biochem.)

MARTIN, S. FORREST (a. s. Oph.), Oph. 1938
165 Bay State Rd., Boston, Mass.

MARTINEZ, DANIEL E. M., Laryn. 1953
Veterans Hosp., Dallas, Tex.

MATTIS, ROBERT DEAN, Oph. 1942
634 N. Grand Blvd., St. Louis, Mo.

McCABE, FRANK J., Oph. 1916
204 Angell, Providence, R. I.

McCALL, ROBERT E., Laryn. 1938
236 S. Main, Marion, N. C.

McCLINTOCK, WALTER L., Laryn. 1938

MCENEANEY, JOSEPH P., Laryn. 1947
301 Essex, Lawrence, Mass.

McGUIGAN, G. EDMUND, Oph. 1924
26 W. King, York, Pa.

McINTIRE, FREDERIC J., Oph. 1910
63 N. Common, Lynn, Mass.

McKEIGUE, JOHN E. (assoc. s. Laryn.),
Laryn. 1949
274 Commonwealth Ave., Boston, Mass.
94 Pleasant Ave., Arlington, Mass.

MCKENZIE, RODNEY J., Laryn. 1942
480 Doctors' Bldg., 19 Garfield Pl.,
Cincinnati, Ohio

MCLEOD, ANGUS M., Laryn. 1942
Medical Arts Bldg., Toronto, Ont., Canada

MCLEOD, JOHN, Oph. 1930
209 Tower Bldg., 116 W. 47th, Kansas City, Mo.

MEEK, RAYMOND E., Oph. 1926
"The North House," Stephentown, N. Y.

MELTZER, PHILIP E. (s. Laryn. & s. Winthrop
Fd.), Aural 1919
285 Commonwealth Ave., Boston, Mass.

MERTINS, PAUL S., Laryn. 1936
46 Clayton, Montgomery, Ala.

MESSENGER, HARRY K., Oph. 1934
140 Marlborough, Boston, Mass.

MEYER, MONTO F., Oph. 1919
904 Canal Bank Bldg., New Orleans, La.

MILAM, DANIEL F., Oph. 1955

MILES, NATHAN E., Oph. 1937
1031 S. 21st, Birmingham, Ala.

MILLER, DANIEL (assoc. s. Laryn.), Laryn. 1943
60 Charlesgate West, Boston, Mass.

MILLS, LLOYD, JR., Oph. 1947
1136 West Sixth, Los Angeles, Cal.

MONTGOMERY, WILLIAM W. (a. s. Laryn.
& a. to c. Laryn.), Laryn. 1955
243 Charles, Boston, Mass.

MOORE, DONALD E., Oph. 1937
713 E. Genessee, Syracuse, N. Y.

MOORE, EDWARD E., Oph. 1944
200 Battery Park Ave., Asheville, N. C.

MOORE, JAMES A., Laryn. 1940
525 E. 68th, N. Y. C.

MOORMAN, JOHN D., Oph. 1939
221 E. Holmes, Huntsville, Ala.

MOORMAN, LEMUEL T. (fel. Oph.)

MORGAN, ANN S. (a. r. Oph. path.)

MORRISSEY, ARTHUR M. (a. Oph.)
24 Rural Ave., Medford, Mass.

MASSACHUSETTS EYE AND EAR INFIRMARY

MOSHER, HENRY A. (a. s. Oph.) , Oph. 1941
266 Beacon, Boston, Mass.

MOTELEY, FREDERICK E., Laryn. 1925
Charlotte Eye & Ear Hospital, Charlotte, N. C.

MOULTON, EVERETT C., Jr., Oph. 1948
1214 N. B., Fort Smith, Ark.

MUELLER, WERNER (dir. Laryn. path. & Mosher
Lab.) , Laryn. 1933
243 Charles, Boston, Mass.

MURPHY, WILLIAM E., Laryn. 1933
390 Main, Worcester, Mass.

MYERS, ROSCOE W., Oph. 1927
36 Pleasant, Worcester, Mass.

MYERS, STANLEY A., Laryn. 1937
3119 Market, Youngstown, Ohio

MYSEL, PHILIP (cons. s. Laryn.)
79 Bay State Rd., Boston, Mass.

NACHLAS, N. EDWARD, Laryn. 1951
2 E. Read, Baltimore, Md.

NAVAS, LUIS, Laryn. 1950
Apartado N. 376, Managua, Nicaragua, C. A.

NICHOLSON, HARRY M., Aural 1913
1 Young, Hamilton, Ont., Canada

O'CONNELL, JOHN D., Oph. 1943
50 Farmington Ave., Hartford, Conn.

O'CONNOR, MICHAEL JOHN, Aural & Lar. 1923
105 Waterman, Providence, R. I.

OFFENBACH, BERTHA (a. Oph.)
51 Homer, Newton Centre, Mass.

OGDEN, FREDERIC W., Laryn. 1942
19 E. Center, Fayetteville, Ark.

OKAMURA, ICHIRO D. (a. Oph.) , Oph. 1952
99 W. Cedar, Boston, Mass.

OLDS, BOMAR A., Laryn. 1929
124 W. Princeton Ave., College Park, Ga.

OLIVE, GEORGE M., JR., (r. Oph.)

OLIVER, PETER (r. Laryn.)

PARKER, HARRY C., Oph. 1902
831 Garfield, Hobart, Ind.

PATTERSON, WILLIAM J., Laryn. 1956
1541 W. Broadway, Vancouver 9, B. C.

PAVLO, IRVING (a. Oph.)
520 Beacon, Boston, Mass.
50 Shepard, Cambridge, Mass.

PERRETTEN, FRANK A., Oph. 1957
208 Reynolds Bldg., Winston-Salem, N. C.

PERONE, PIERO, Laryn. 1955

PFISTER, RAYMOND L., Laryn. 1952
1298 Herschel Ave., Cincinnati, Ohio

PIERCE, DAVID L. (r. Laryn.)

PIPPITT, RICHARD B. (a. s. Oph.) , Oph. 1949
328 Washington, Wellesley Hills, Mass.

POIRIER, GEORGE H. (cons. s. Laryn.)
60 Bay State Rd., Boston, Mass.

POLLEN, ABRAHAM (a. s. Oph.) , Oph. 1944
636 Beacon, Boston, Mass.

POLLOCK, FREDERIC J., Laryn. 1935
104 S. Michigan Ave., Chicago, Ill.

POPPEN, MAYO J., Oph. 1948
14426 Van Nuys Blvd., Van Nuys, Cal.

POSNER, MARVIN, Oph. 1952
371 State, Albany, N. Y.

PRICE, R. RAYMOND, Oph. 1936
118 Rutledge Ave., Charleston, S. C.

PROVOST, ADOLPHE J., Laryn. 1927
1458 Elm, Manchester, N. H.

PRUDHON, CHARLES A., Laryn. 1927
168 Sterling, Watertown, N. Y.

PRYOR, CHESTER T., II (fel. Oph.)

QUEVEDO, A. ARTURO, Oph. 1933
4a Ave., Sur 19, Guatemala City, Guatemala, C. A.

QUEVEDO, JULIO, Laryn. 1941
15 Calle 6 - 59, Guatemala City, Guatemala, C. A.

RAGAN, JOHN D., Oph. 1954
736 Granville, Vancouver 2, B. C.

RAMBO, J. H. TOM, Laryn. 1948
535 Park Ave., N. Y. C.

RAYNES, ALPHONSE F., Oph. 1923
209 Miller Ave., Portsmouth, N. H.

REAGAN, DANIEL J., Oph. 1943, Laryn. 1944
507 Main, Worcester, Mass.

REED, GEORGE F. (a. s. Laryn. & a. to c. Laryn.) ,
Laryn. 1952
243 Charles, Boston, Mass.

REGAN, CHARLES D. J. (a. Oph.) , Oph. 1953
99 W. Cedar, Boston, Mass.

RICE, EARLE W., Laryn. 1953
390 Main, Worcester, Mass.

RICE, THEODORE A., Oph. 1942
2021 N. Central, Phoenix, Ariz.

RICHARDS, LYMAN G. (cons. s. Laryn.) ,
Laryn. 1924
Medical Dept., M.I.T., Cambridge, Mass.

ONE HUNDRED AND THIRTY-SECOND ANNUAL REPORT

RICHARDSON, JOHN R. (s. Laryn., s. Bron. & Esoph.) , Laryn. 1935
403 Commonwealth Ave., Boston, Mass.

RIEMER, KARL (a. s. Oph.) , Oph. 1943
403 Commonwealth Ave., Boston, Mass.

RIFE, CHARLES J., Oph. 1958
716 N. Lime, Lancaster, Pa.

RING, HENRY G., Oph. 1958
476 Summer, Arlington, Mass.

ROBINSON, MENDELL (a. Laryn.) , Laryn. 1957
206 Waterman, Providence, R. I.

ROGERS, WILLIAM P., JR. (a. s. Laryn.)
275 Charles, Boston, Mass.
101 River Rd., Weston, Mass.

ROOPENIAN, ARAM (a.s.p.o.) , Laryn. 1944
475 Commonwealth Ave., Boston, Mass.

ROSENBLITH, WALTER A. (res. assoc. Otol.)
M.I.T., Cambridge, Mass.

ROSS, PERCY J., Laryn. 1935

ROTHWELL, STEPHEN C., Laryn. 1925
S. Dartmouth, Mass.

RUBEN, MAURICE (a. s. Laryn.)
151 Maple, Springfield, Mass.

RUGGLES, RALPH H. (cons. s. Oph.) , Oph. 1920
394 Marlborough, Boston, Mass.
135 County on Rt. 109, Medfield, Mass.

RUNGE, PAUL M. (a. Oph.)
140 Marlborough, Boston, Mass.
47 W. Elm, Brockton, Mass.

SACHS, BARUCH J. (a. Oph.) , Oph. 1957
636 Beacon, Boston, Mass.

SACHS, BENJAMIN (cons. s. Oph.) , Oph. 1925
636 Beacon, Boston, Mass.

SADE, JACOB, Laryn. 1958
47 Rothchild Blvd., Tel Aviv, Israel

SAEED, YUNIS M., Laryn. 1954
1432 Floribunda Ave., Burlingame, Cal.

SAINSBURY, AUGUSTUS W., Laryn. 1943
134 N. Main, Canadaigua, N. Y.

SAMS, JAMES M., Laryn. 1949
200 W. Market, Johnson City, Tenn.

SARGENT, FRANCIS B., Aural & Lar., 1923
124 Waterman, Providence, R. I.

SAVAGE, ROSS E., Oph. 1910
201 Main, Gloucester, Mass.

SCARNEY, HERMAN D., Oph. 1928
3011 W. Grand Blvd., Detroit, Mich.

SCHALL, LEROY A. (c. Laryn.)
243 Charles, Boston, Mass.

SCHEPENS, CHARLES L. (a. s. Oph. & dir.
Ret. Fd.)
99 W. Cedar, Boston, Mass.

SCHNEBLY, J. THOMAS, Oph. 1936
11134 Georgia Ave., Silver Spring, Md.

SCOTT, ALFRED W. (a. Oph.) , Oph. 1955
7 Bay State Rd., Boston, Mass.

SCOTT, DAVID H. (a. s. Oph.) , Oph. 1949
7 Thorndike, Beverly, Mass.

SEALE, EARL S. (a. s. Oph.) , Oph. 1940
126 Bay State Rd., Boston, Mass.

SHAMBAUGH, GEORGE E., JR., Laryn. 1932
55 E. Washington, Chicago, Ill.

SHEA, JOHN J., Laryn. 1953
1018 Madison Ave., Memphis, Tenn.

SHEEHAN, LINUS A., Oph. 1943
210 Angell, Providence, R. I.

SHERMAN, MORRIS, Laryn. 1950
82 W. Commerce, Bridgeton, N. J.

SHLOSSBERG, FRANK R. (a. s. Laryn.)
160 Summer, Haverhill, Mass.

SKILLING, FRANCIS C., Oph. 1933
25 S.E. 2nd Ave., Miami, Fla.

SLAUGHTER, EARL C., Laryn. 1940
1265 Fifth, Norfolk, Neb.

SLOANE, ALBERT E. (assoc. s. Oph.)
416 Marlborough, Boston, Mass.

SMITH, HAROLD, Laryn. 1937
1149 N. Garvey Ave., Pomona, Cal.

SMITH, J. LAWTON (fel. Oph.)

SMITH, TAYLOR R. (a. s. Oph. & dir. Oph.
path.) , Oph. 1951
243 Charles, Boston, Mass.

SMITH, WILLIAM L., Oph. 1950
U. S. Naval Hosp., Philadelphia, Pa.

SNOW, JAMES B., JR. (r. Laryn.)

SNOW, JOHN C. (c. Anes.)
243 Charles, Boston, Mass.

SNOW, ROBERT G., Laryn. 1940
508 E. S. Temple, Salt Lake City, Utah

SPINOLA, EDMUND T. L., Laryn. 1954
Rua Da Graca 19, Bahia, Brazil, S. A.

SPRATT, CHARLES N., Oph. 1904
5725 N. 11th, Phoenix, Ariz.

STAPFF, VOLKER H., Laryn. 1952
Agraciada 1640, Montevideo, Uruguay, S. A.

MASSACHUSETTS EYE AND EAR INFIRMARY

STEMMER, AUGUST L. (r. Laryn.)

STEPHENS, H. FREDERICK, Oph. 1939
195 Thayer, Providence, R. I.

STERNSTEIN, HERMAN J. (assoc. s. Laryn.)
54 Winter, Norwood, Mass.

STONE, WILLIAM, JR. (a. s. Oph., dir. Oph.
Plastics lab), Oph. 1949
243 Charles, Boston, Mass.
1101 Beacon, Brookline, Mass.

STONECYPER, DAVID, JR., Oph. 1959
1320 Fourth Ave., Nebraska City, Neb.

SUDARSKY, RAYMOND DAVID, Oph. 1956
11 E. 68th, N. Y. C.

SULLIVAN, GARRETT L. (assoc. s. Oph.),
Oph. 1938
275 Charles, Boston, Mass.

SULLIVAN, JOHN J. (a. Oph.)
9 Central, Lowell, Mass.

SWARTZ, MORRIS (a. Laryn.)
18 Broad, Lynn, Mass.

SWEEBE, EDWARD C. (fel. Oph.)

TEGELBERG, JULIUS, Laryn. 1931
121 Lincoln, Worcester, Mass.

THOMAS, JOHN H., Laryn. 1944, Oph. 1946
1621 E. Market, Warren, Ohio

THORLAKSON, NEIL F., Oph. 1956
916 Cobb Bldg., Seattle, Wash.

TOOT, J. FREDERICK, Oph. 1922
120 Tyscarawas, W. Canton, Ohio

TROTTER, ROBERT R. (a. Oph. & a. to c.
Oph.), Oph. 1951
243 Charles, Boston, Mass.

TUCKER, DONALD P. (r. Oph.)

TWITCHELL, MARSHALL C., Oph. 1941
217 S. Union, Burlington, Vt.

VAIL, DERRICK T., Oph. 1924
700 N. Michigan Ave., Chicago, Ill.

VERHOEFF, FREDERICK H. (cons. c. Oph.)
395 Commonwealth Ave., Boston, Mass.

VIGER, ROLAND J., Oph. 1937
Medical Bldg., 1414 Drummond, Montreal,
Que., Canada

von PIRQUET, SILVIO (fel. Oph.)

WALKER, D. HAROLD (cons. s. Laryn.), Aural
1902
Peterborough, N. H.

WATTLES, F. MERRILL, Laryn. 1938
1200 Kuhl Ave., Orlando, Fla.

WEBSTER, FRANKLIN R., Oph. 1926
109 S. Warren, Syracuse, N. Y.

WEILLE, FRANCIS L. (s. Laryn. & s. Winth. Fd.),
Laryn. 1929
247 Commonwealth Ave., Boston, Mass.

WEISER, ALBERT (a. Laryn.)
390 Pine, Fall River, Mass.

WEISMAN, HERMAN J., Laryn. 1944
509 W. Willow, Visalia, Cal.

WEST, FRANCIS J. (a. s. Oph.), Oph. 1947
195 Ashmont, Dorchester, Mass.

WHITE, LEON E. (cons. s. Laryn.), Aural &
Lar. 1923
126 Oak Crest Drive, Framingham, Mass.

WHITNEY, JEREMY B. (r. Oph.)

WHITNEY, RAYMOND C., Oph. 1922
227 Union, New Bedford, Mass.

WILKER, SIDNEY R. (a. Laryn.)
285 Commonwealth Ave., Boston, Mass.

WILKINS, SAMUEL H. (cons. s. Oph.)
270 Commonwealth Ave., Boston, Mass.

WILLIS, HARRY C., Aural & Lar. 1923
216 E. Nash, Wilson, N. C.

WINKLER, HERMAN A., Laryn. 1926
224 Thayer, Providence, R. I.

WISHART, DAVID E. S., Aural & Lar. 1922
170 St. George, Toronto, Ont., Canada

WOODWARD, M. WAYNE, Oph. 1950
20 Battery Park Ave., Asheville, N. C.

WOODWARD, ARTHUR S. (fel. Laryn.),
Laryn. 1958

WRIGHT, CLARENCE F., Laryn. 1931
Weston, Ont., Canada

WRIGHT, EDWARD N., Laryn. 1933
106 Med. Arts Bldg., Port Arthur, Ont., Canada

ZACHARIAS, LEONA (biol.)
243 Charles, Boston, Mass.

ZANEK, OTTO L., Oph. 1946
802 Travis, Houston, Tex.

ZAVALIA, JULIO U., Laryn. 1958
Av. Hipolito Irigoyen 386, Cordoba, Argentina

ZEAVIN, BERNARD, Oph. 1954
312 S. Washington, Alexandria, Va.

ZIV, BENJAMIN (fel. Oph.)

ZONDERMAN, BERNARD (assoc. s. Laryn. &
a. s. Winth. Fd.), Laryn. 1946
285 Commonwealth Ave., Boston, Mass.

ZOVICKIAN, ANTHONY (a. s. Laryn.)
274 Commonwealth Ave., Boston, Mass.

In Memoriam

WALLACE FALVEY

Member of the Board of Managers

May 1, 1894 — November 7, 1958

1950 — Commonwealth appointee to the Board of Managers

1951 — Chairman of the Social Service Advisory Committee

CHARLES I. JOHNSON, M.D.

Consulting Surgeon in Otolaryngology

June 1, 1898 — September 30, 1958

1927 — Resident in Otolaryngology

1929 — Clinical Assistant in Otolaryngology

1936 — Assistant Surgeon in Otolaryngology

1940 — Associate Surgeon in Otolaryngology

1947 — Surgeon in Otolaryngology

1955 — Consulting Surgeon in Otolaryngology

EDWARD F. LAWLOR, M.D.

Assistant Surgeon in Otolaryngology

September 4, 1911 — January 27, 1959

1939 — Resident in Otolaryngology

1945 — Clinical Assistant in Otolaryngology

1951 — Assistant Surgeon in Otolaryngology

PATRICK A. O'CONNELL

Member of the Board of Managers

February 13, 1871 — March 6, 1958

1934 — Commonwealth appointee to the Board of Managers

MAURICE B. RAPPAPORT

Research Associate in Otology

February 5, 1907 — May 7, 1958

1957 — Research Associate in Otology

Massachusetts
Eye and Ear Infirmary

ONE HUNDRED and THIRTY-THIRD
ANNUAL REPORT

REPORTS FOR 1959

STAFF AND OFFICERS FOR 1960



BOSTON 14, MASSACHUSETTS

Massachusetts
Eye and Ear Infirmary

ONE HUNDRED and THIRTY-THIRD
ANNUAL REPORT

REPORTS FOR 1959

STAFF AND OFFICERS FOR 1960



243 CHARLES STREET

Telephone: LAFAYETTE 3-7900

BOSTON 14, MASSACHUSETTS

MASSACHUSETTS EYE AND EAR INFIRMARY

INCORPORATED IN 1827

THE MASSACHUSETTS EYE AND EAR INFIRMARY and its Clinics serve men, women, and children from all over New England and beyond who need expert care for diseases and injuries of the eye, ear, nose, and throat. Established in 1824, the Infirmary is one of the two oldest hospitals in the country specializing in the preservation of good eyesight and sound hearing.

The Infirmary is a voluntary hospital — an independent, non-profit, private institution. The Board of Managers is non-paid and the Staff of specialists gives its services without charge to patients in the clinics and to those patients who come into the hospital "on service." The hospital receives no support from city or state but is financed by receipts from patients, by voluntary gifts and bequests, and by our allotment from the United Community Services as a "Red Feather Service." However, the Infirmary's allotment from the United Community Services is not sufficient to cover the amount the hospital gives in "free service" to patients from the Greater Boston area who cannot pay for their own care.

In many ways the Infirmary and the Massachusetts General Hospital, its neighbor, cooperate to give complete medical service to patients. The Clinics of both hospitals share a common Admitting Office with its entrance on Fruit Street. Also, for maximum efficiency and economy, the two hospitals unite in such services as pharmacy, patients' records, personnel.

The Clinics and service beds at the Infirmary are open to those who are not able to pay doctors' fees, since the Staff gives its services without charge to such patients. All patients in the Clinics and in the hospital are under the medical and surgical care of doctors on the hospital staff who are specialists in Ophthalmology and Otolaryngology.

Whenever the patient is already under the care of a doctor, arrangements for his admission to the

Infirmary should be made by his own doctor, or the patient should bring a letter from his doctor recommending admission to the hospital. However, any patient who is not under a doctor's care and who is not able to pay for private care, is eligible for treatment in the Clinics and service accommodations. In cases of emergency, of course, a patient is admitted immediately at any time of the day or night.

The Clinics, located on Fruit Street, are open daily except Sunday and legal holidays* for a fee of \$3.50† per clinic visit. After a preliminary interview, patients are examined by the clinic doctor and treatment is prescribed. If further treatment is necessary, the clinic patient is given an appointment for his next visit, as all but the first visit are by appointment only.

Patients are admitted to the service accommodations by direct appointment with the Admitting Office, 243 Charles Street, from 9 to 10 A.M. daily except Sunday and legal holidays. Arrangement for admission to private accommodations is made by the Staff doctor in charge of the patient, who then comes on the appointed day to the Infirmary Admitting Office.

Daily rates† for board and room for service patients are \$23. For private patients, five and six bed rooms are \$25 and two bed rooms are \$28 and \$30, single room with lavatory, \$32 per day, and single room with bath from \$34 to \$40. In the Children's Wing, semi-private accommodations are \$26 per day. These rates include general nursing, ordinary medicine. Additional charges are made for operating room, x-ray, laboratory tests, special nursing.

Blue Cross (Associated Hospital Service) plans are accepted at the Infirmary, the benefits being allowed as soon as approval has been received. All other non-profit insurance is handled by the patient for himself, and he pays the regular rates to the hospital.

*Ear, Nose and Throat Clinic not open Saturdays in July and August.

†As of April 1, 1960.

ONE HUNDRED AND THIRTY-THIRD ANNUAL REPORT

Board of Managers

1959

President	Henry Hixon Meyer, 53 State Street, Boston	1937
Secretary	Honorable Edmund V. Keville, 10 Pemberton Sq., Boston	1942-43, 1945
Treasurer	Horace W. Frost, 74 State Street, Boston	1940
Melville Chapin	84 State Street, Boston	1956
William H. Claflin, III	74 State Street, Boston	1947
Mrs. Richard Cary Curtis	Manchester	1940
Mrs. John W. Farley	898 South Street, Needham	1957
Mrs. Foster Furcolo*	45 Tudor Road, Chestnut Hill	1959
Robert H. Hopkins	82 Devonshire Street, Boston	1951
William A. Parker	200 Berkeley Street, Boston	1935
Mrs. Sullivan A. Sargent	701 South Street, Needham	1945
LeRoy A. Schall, M.D.*	66 Beacon Street, Boston	1959
Walter H. Trumbull	185 Meadow Brook Road, Weston	1929
Frederic Winthrop	Groton House, Ipswich	1943

* appointed by the Commonwealth

Corporation

(in addition to Managers)

Robert F. Bradford	53 State Street, Boston
Richard P. Chapman	28 State Street, Boston
William Ehrlich	1360 Commonwealth Avenue
Nathaniel Faxon, M.D.	West Falmouth
Richard Harte, Sr.	Ames Company, North Easton
Francis W. Hatch, Jr.	N. E. Mutual, 501 Boylston St., Boston
Thomas H. Hoare	6 Beacon Street, Boston
Weston Howland, Jr.	75 Federal Street, Boston
Mrs. Francis T. Hunter	56 Lawrence Road, Chestnut Hill
Mrs. Varaztad H. Kazanjian	191 Clifton Street, Belmont
William F. Keesler, Jr.	342 Beacon Street, Boston
Arthur T. Lyman	37 Thatcher Street, Westwood
George A. McLaughlin	11 Pemberton Square, Boston
Rev. Robert G. Metters	St. George's School, Route 5, Spokane, Wash.
August R. Meyer	53 State Street, Boston
Miss Amelia Peabody	120 Commonwealth Avenue, Boston
George L. Pew	17 Storer Street, Portland, Maine
Henry K. Porter	74 Foley Street, Somerville
Huston Rawls	84 State Street, Boston
Honorable Leverett Saltonstall	82 Devonshire Street, Boston
William L. Saltonstall	82 Devonshire Street, Boston
Arthur L. Sherin	80 Federal Street, Boston
Leslie Soule	Strawberry Hill Street, Dover
Frederick H. Verhoeff, M.D.	61 Monmouth Street, Brookline
D. Harold Walker, M.D.	"Tree Tops," Peterborough, N. H.
Howland S. Warren	1 Federal Street, Boston

MASSACHUSETTS EYE AND EAR INFIRMARY

Committees

EXECUTIVE COMMITTEE

Henry Hixon Meyer, *Chr.*
Horace W. Frost
William H. Claflin, III
Robert H. Hopkins

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Horace W. Frost
William A. Parker

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Dean George Packer Berry
Prof. Paul H. Buck
David G. Cogan, M.D.

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Moses H. Lurie, M.D.
Harry K. Messenger, M.D.

Francis S. Hill

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George Kelemen, M.D.
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Philip E. Meltzer, M.D.
Walter A. Rosenblith, Ing. Rad.
Charles L. Schepens, M.D.
Stephen M. Smithwick
William D. Sohier, Jr., M.D., *Ex. Sec.*
Herman J. Sternstein, M.D.
William Stone, Jr., M.D.
Francis L. Weille, M.D.
Charles T. Wood

Leona Zacharias, Ph.D.

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Horace W. Frost

William H. Claflin, III
Francis S. Hill

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George A. McLaughlin
Walter H. Trumbull

Francis S. Hill
Charles T. Wood
Raymond W. Lyons

ONE HUNDRED AND THIRTY-THIRD ANNUAL REPORT

SOCIAL SERVICE ADVISORY COMMITTEE

Henry K. Porter, *Chr.*
Mrs. Varaztad H. Kazanjian
Mrs. Edgar M. Holmes
Miss Ruth Farrisey, R.N.

Moses H. Lurie, M.D.
Robert R. Trotter, M.D.
John E. McKeigue, M.D.
Reverend Thomas J. Carroll

Weston Howland, Jr.

HOUSE COMMITTEE

Mrs. John W. Farley, *Chr.*
Melville Chapin
Abraham Pollen, M.D.
George F. Reed, M.D.

PUBLIC RELATIONS ADVISORY COMMITTEE

Francis W. Hatch, Jr., *Chr.*
Thomas H. Hoare

LADIES VISITING COMMITTEE

<i>Chairman</i>	Mrs. Varaztad H. Kazanjian
<i>Vice-Chairman</i>	Mrs. John R. Richardson
<i>Treasurer</i>	Mrs. Herbert W. Kelley
<i>Recording Secretary</i>	Mrs. Roy R. Wheeler
<i>Corresponding Secretary</i>	Mrs. Harry E. Braconier

Mrs. David H. Bangs
Mrs. William A. Barron, Jr.
Mrs. Lucy B. Barry
Mrs. Lawrence Bass
Mrs. Maurice Berlin
Mrs. Arlie V. Bock
Mrs. Nehemiah Boynton, Jr.
Mrs. Harry P. Cahill
Mrs. Paul A. Chandler
Mrs. Richard B. Chapman
Mrs. Julian F. Chisholm, Jr.
Mrs. Nathaniel D. Clapp
Mrs. Joseph M. Clough
Mrs. Robert W. Clubb
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Mrs. Colin McA. Cunningham
Mrs. Henry E. W. Cunningham
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Mrs. Livingston Davis
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Mrs. David D. Donaldson
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Mrs. Harold S. Geneen

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Mrs. William W. Montgomery
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Mrs. Grafton B. Perkins
Mrs. David Pierce
Mrs. Henri Prunaret
Miss Mary A. Redman

Mrs. Franklin A. Reece
Mrs. George F. Reed
Mrs. Walter E. Robb, Jr.
Mrs. William P. Rogers, Jr.
Mrs. Nathan Rothenberg
Mrs. Baruch J. Sachs
Mrs. Benjamin Sachs
Mrs. Ernest J. Sargeant
Mrs. Sullivan A. Sargent
Mrs. LeRoy A. Schall
Mrs. Charles L. Schepens
Mrs. Henry R. Scott
Mrs. Albert E. Sloane
Mrs. Reginald H. Smith
Mrs. James B. Snow, Jr.
Mrs. John C. Snow
Mrs. Leslie Soule
Mrs. Richard Southgate
Mrs. Channing S. Swan
Mrs. Thomas C. Thacher
Mrs. John E. Thayer, Jr.
Mrs. D. Stephen Thrall
Mrs. Robert Truesdale
Mrs. Frederick H. Verhoeff
Mrs. George Vinsonhaler
Mrs. Lyon Weyburn
Mrs. John R. Whitney
Mrs. Harold B. Willis
Mrs. Andrew N. Winslow, Jr.
Mrs. Stewart C. Woodworth
Mrs. Anthony Zovickian

HONORARY MEMBERS

Miss Sally Fairchild

Mrs. Harold Peabody

Mrs. Harris P. Mosher

Department of Ophthalmology

Chief of Ophthalmology

Edwin B. Dunphy, M.D.

Consulting Chief of Ophthalmology

Frederick H. Verhoeff, M.D.

Surgeons in Ophthalmology

William P. Beetham, M.D.
Virgil G. Casten, M.D.
Trygve Gundersen, M.D.
David G. Cogan, M.D.
Brendan D. Leahey, M.D.
Mahlon T. Easton, M.D.

Associate Surgeons in Ophthalmology

Albert E. Sloane, M.D.
Garrett L. Sullivan, M.D.
Thomas Cavanaugh, M.D.
Earl S. Seale, M.D.
Carl C. Johnson, M.D.

Assistant Surgeons in Ophthalmology

Edward E. Covitz, M.D.
S. Forrest Martin, M.D.
Henry A. Mosher, M.D.
Abraham Pollen, M.D.
Sumner D. Liebman, M.D.
Harry E. Braconier, M.D.
Karl Riemer, M.D.
W. Morton Grant, M.D.
Charles H. MacLaughlin, M.D.
Francis J. West, M.D.

Joseph M. Clough, M.D.
Charles M. Schepens, M.D.
Henry F. Allen, M.D.
Julian F. Chisholm, Jr., M.D.
Richard B. Pippitt, M.D.
David H. Scott, M.D.
Taylor R. Smith, M.D.
William Stone, Jr., M.D.
Frederic B. Breed, M.D.

Robert J. Brockhurst, M.D.
Warren D. Haley, M.D.
Thomas P. Cronin, M.D.
Edwin B. Goodall, M.D.
(leave of absence)
John M. Hill, M.D.
Arthur M. Morrissey, M.D.
Ichiro D. Okamura, M.D.
D. Robert Alpert, M.D.
Robert R. Trotter, M.D.

Assistants in Ophthalmology

Peter Beck, M.D.
S. Arthur Boruchoff, M.D.
S. James Bullington, M.D.
(leave of absence)
Arthur F. Calnan, M.D.
Richard B. Chapman, M.D.
David D. Donaldson, M.D.
Joseph L. Dowling, Jr., M.D.

Carl Gates Freese, Jr., M.D.
Robert J. Herm, M.D.
Paul D. Hurley, M.D.
Carl Kupfer, M.D.
Robert C. Lawlor, M.D.
Byron S. Lingeman, M.D.
Irwin T. Mancall, M.D.
Bertha Offenbach, M.D.
George M. Olive, Jr., M.D.

Irving L. Pavlo, M.D.
Charles D. J. Regan, M.D.
Henry J. Ring, M.D.
Paul M. Runge, M.D.
Baruch J. Sachs, M.D.
Alfred W. Scott, M.D.
Edward C. Sweebe, M.D.
Michael Wiedman, M.D.

Residents in Ophthalmology

Howard E. Adkins, M.D.
Eugene C. Ciccarelli, M.D.
Ephraim Friedman, M.D.
John R. Gehring, M.D.

Firmon E. Hardenbergh, M.D.
Kevin Hill, M.D.
Ralph Hinckley, M.D.
Louis L. Johnson, M.D.
Herbert E. Kaufman, M.D.

Francis A. L'Esperance, M.D.
Jay J. Riclin, M.D.
Richard J. Simmons, M.D.
Jeremy B. Whitney, M.D.

Assistant Resident in Ophthalmic Pathology

Anne S. Morgan, M.D.

Fellows in Ophthalmology

Norman E. Beyer, M.D.
John Carroll, M.D.
Joel Contreras, M.D.
Claes-Henrik Dohlman, M.D.
Jean Dumas, M.D.
Julianna Fodor, M.D.

Jack E. Goldstein, M.D.
William S. Hagler, M.D.
Raymond Harrison, M.D.
Stephen S. Pappas, M.D.
Leon J. Richard, M.D.

Uthai Rutnin, M.D.
Felix N. Sabates, M.D.
John G. Sebestyen, M.D.
Jorge Silva F., M.D.
Silvio von Pirquet, M.D.
Benjamin Ziv, M.D.

ONE HUNDRED AND THIRTY-THIRD ANNUAL REPORT

Department of Otolaryngology

Acting Chief of Otolaryngology

Philip E. Meltzer, M.D.

Surgeons in Otolaryngology

Vincent J. Kelley, M.D.
Walter J. E. Carroll, M.D.
John R. Richardson, M.D.

John R. Frazee, M.D.
Joseph Lentine, M.D.
J. Charles Drooker, M.D.

Surgeon for Bronchoscopy and Esophagoscopy

John R. Richardson, M.D.

Surgeon for Plastic Operations

Edgar M. Holmes, M.D.

Associate Surgeons in Otolaryngology

Herman J. Sternstein, M.D.
Donald K. Lewis, M.D.
John E. McKeigue, M.D.
George F. Reed, M.D.

Bernard Zonderman, M.D.
Charles Kent, M.D.
Aram Roopenian, M.D.

Associate Surgeon for Tumor Clinic

Daniel Miller, M.D.

Assistant Surgeons in Otolaryngology

Elizabeth DeBlois, M.D.
Maurice Ruben, M.D.
Kenneth A. Kazanjian, M.D.

Anthony Zovickian, M.D.
William P. Rogers, Jr., M.D.

William W. Montgomery, M.D.
Hugo D. Angelini, M.D.
Robert E. Klotz, M.D.

Assistants in Otolaryngology

Louis E. Griffey, M.D.
Lawrence S. Hirsch, M.D.
Alfred L. Hurst, M.D.
Sidney Shore, M.D.
Albert Williams, M.D.

Morris Swartz, M.D.
John C. Trakas, M.D.
Albert Weiser, M.D.
Sidney R. Wilker, M.D.

Residents in Otolaryngology

Lawrence R. Boies, Jr., M.D.
Carlos A. Castellanos, M.D.
Werner D. Chasin, M.D.
Robert W. Clubb, M.D.

Shiro Fujita, M.D.
Robert P. Gulick, M.D.
William L. Hayden, M.D.
Julius N. Hicks, M.D.

Robert H. Lofgren, M.D.
Peter Oliver, M.D.
David L. Pierce, M.D.
James B. Snow, Jr., M.D.

Fellows in Otolaryngology

Frank W. Brady, M.D.
Geza Jako, M.D.

John H. Neame, M.D.
John B. Walter, M.D.

Research Associates in Otology

Walter A. Rosenblith, Ing. Rad.
Himli Arslan, M.S.
Walter S. Burrage, M.D.

Research Assistant in Otology

Nelson Y. Kiang, Ph.D.

Electronics Engineers in Otology

Robert M. Brown, B.S.
Alan Crist, B.S.
Donald F. O'Brien, E.E.

Senior Consulting Surgeons

OPHTHALMOLOGY

Samuel H. Wilkins, M.D.
Ralph H. Ruggles, M.D.
Merrill J. King, Sr., M.D.
Benjamin Sachs, M.D.
Paul A. Chandler, M.D.

Consultant in Eye Pathology

Parker Heath, M.D.

OTOLARYNGOLOGY

D. Harold Walker, M.D. Lyman G. Richards, M.D.
Frederick L. Bogan, M.D. Moses H. Lurie, M.D.
Leon E. White, M.D. Robert L. Goodale, M.D.
Edwards W. Herman, M.D. Carl H. Ernlund, M.D.
Gustave B. Fred, M.D. Charles H. Allman, M.D.
Philip Mysel, M.D. Maurice G. Evans, M.D.
LeRoy A. Schall, M.D.

Plastic Operations

Varaztad H. Kazanjian, M. D.

Roentgenologist

Alexander S. Macmillan, M.D.

Assistant Roentgenologist

Alexander S. Macmillan, Jr., M.D.

Anesthesiologist

John C. Snow, M.D.

Fellows in Anesthesiology

Raniero DiPiero, M.D.
Kamil Ergin, M.D.
Kiyoshi Ishii, M.D.
Sotiria Mourkidou, M.D.

Director of Ophthalmic Pathology

Taylor R. Smith, M.D.

Assistant Ophthalmic Pathologist

Toichiro Kuwabara, M.D.

Director of Otolaryngological Pathology

Werner Mueller, M.D.

Bacteriologist

Anita Mangiaracine, A.B.

Associate Director of Ophthalmic Resident Teaching

Paul A. Chandler, M.D.

Biochemists

Endre A. Balazs, M.D.
Sidney Futterman, Ph.D.
Jacques Gosteli, Ph.D.
Harold Kern, D.Sc.
Jin Kinoshita, Ph.D.
S. Peter Marfey, Ph.D.
Herbert Novak, Ph.D.

Biologists

Marie Jakus, Ph.D.
Leona Zacharias, Ph.D.

Director of Pharmaceutical Research & Manufacturing

John T. Murphy, Phm.D.

Director of Pharmacy

John Webb

ONE HUNDRED AND THIRTY-THIRD ANNUAL REPORT

Research

HOWE LABORATORY OF OPHTHALMOLOGY

David G. Cogan, M.D.

OPHTHALMIC PLASTICS LABORATORY

William Stone, Jr., M.D.

RETINA FOUNDATION

Charles L. Schepens, M.D.
Endre A. Balazs, M.D.

ELECTRORETINOGRAPHY LABORATORY

Benjamin Ziv, M.D.

RETROLENtal FIBROPLASIA LABORATORY

Julian F. Chisholm, Jr., M.D.
Leona Zacharias, Ph.D.

UVEITIS LABORATORY

Herbert E. Kaufman, M.D.

Ophthalmic Research Committee

Edwin B. Dunphy, M.D.

Trygve Gundersen, M.D.

Henry F. Allen, M.D.

EATON PEABODY LABORATORY OF AUDITORY PHYSIOLOGY

Walter A. Rosenblith, Ing. Rad.
Nelson Y. Kiang, Ph.D.

MICROCIRCULATORY LABORATORY

John W. Irwin, M.D.

BIOCHEMISTRY LABORATORY

S. Peter Marfey, Ph.D.

TEMPORAL BONE LABORATORY

George Kelemen, M.D.

VIRUS LABORATORY

Robert S. Gohd, Ph.D.

ATROPHIC RHINITIS LABORATORY

Herman Sternstein, M.D.

TINNITUS LABORATORY

George F. Reed, M.D.

Director of Otolaryngological Research

John W. Irwin, M.D.

Coordinator of Otolaryngological Research

John W. Irwin, M.D.

Consulting Physicians

Myles P. Baker, M.D.

William H. Baker, M.D.

Victor G. Balboni, M.D.

Walter Bauer, M.D.

William S. Beck, M.D.

Kenneth T. Bird, M.D.

Edward E. Bland, M.D.

Evan Calkins, M.D.

John W. Cass, Jr., M.D.

Earle M. Chapman, M.D.

Richard J. Clark, M.D.

Perry J. Culver, M.D.

Briant L. Decker, M.D.

Charles H. DuToit, M.D.

Daniel S. Ellis, M.D.

Dana L. Farnsworth, M.D.

John H. Fay, M.D.

Richard A. Field, M.D.

Anne P. Forbes, M.D.

Gerald S. Foster, M.D.

William Franklin, M.D.

Allan L. Friedlich, M.D.

Harriet L. Hardy, M.D.

Reed Harwood, M.D.

Frederick T. Hatch, M.D.

Benjamin L. Huntington, M.D.

Kurt J. Isselbacher, M.D.

Bernard M. Jacobson, M.D.

Rita M. Kelley, M.D.

Alfred Kranes, M.D.

Alexander Leaf, M.D.

Jacob Lerman, M.D.

Francis C. Lowell, M.D.

Farane Maloof, M.D.

Janet W. McArthur, M.D.

Gordon S. Myers, M.D.

Lot B. Page, M.D.

Arthur S. Pier, Jr., M.D.

Walter W. Point, M.D.

John T. Quinby, M.D.

Marian W. Ropes, M.D.

Charles L. Short, M.D.

Lloyd H. Smith, Jr., M.D.

John B. Stanbury, M.D.

John D. Stoeckle, M.D.

Joseph Stokes, III, M.D.

George P. Sturgis, M.D.

Morton N. Swartz, M.D.

Arthur L. Watkins, M.D.

Edwin O. Wheeler, M.D.

Conger Williams, M.D.

Richard G. Whiting, M.D.

Paul C. M. Zamecnik, M.D.

MASSACHUSETTS EYE AND EAR INFIRMARY

Consulting Dermatologists

John Adams, Jr., M.D.	Milton E. Helman, M.D.
Paul J. Catinella, M.D.	William R. Hill, Jr., M.D.
Thomas B. Fitzpatrick, M.D.	Mildred Ryan, M.D.
Earle A. Glicklich, M.D.	Robert F. Tilley, M.D.
Robert D. Griesemer, M.D.	Maurice M. Tolman, M.D.

Consulting Neurologists

John A. Abbot, M.D.	Charles M. Fisher, M.D.
Raymond D. Adams, M.D.	Vincent P. Perlo, M.D.
Mandel E. Cohen, M.D.	Edward P. Richardson, Jr., M.D.
Edwin M. Cole, M.D.	Robert S. Schwab, M.D.
Philip R. Dodge, M.D.	William Timberlake, M.D.
Pierre M. Dreyfus, M.D.	Maurice Victor, M.D.
	Henry deF. Webster, M.D.

Consulting Psychiatrists

Herbert Barry, Jr., M.D.	Thomas P. Hackett, M.D.	John C. Nemiah, M.D.
Clemens E. Benda, M.D.	Volta R. Hall, M.D.	Gardner C. Quarton, M.D.
Gerald Caplan, M.D.	Richmond Holder, M.D.	Peter E. Sifneos, M.D.
Franklin Carter, M.D.	Paul M. Howard, M.D.	Alfred H. Stanton, M.D.
Morris E. Chafetz, M.D.	Samuel Kaplan, M.D.	Jerome L. Weinberger, M.D.
Daniel C. Dawes, M.D.	John H. Lamont, M.D.	Avery D. Weisman, M.D.
Frank R. Ervin, M.D.	Erich Lindemann, M.D.	Vernon P. Williams, M.D.
Benjamin F. Gill, M.D.	Maria Lorenz, M.D.	Elizabeth R. Zetzel, M.D.
	Walter Mann, M.D.	

Consulting Pediatricians

T. Berry Brazelton, M.D.	Richard B. Kearsley, M.D.	John S. Robey, M.D.
Leo B. Burgin, M.D.	Arthur J. Linenthal, M.D.	Ralph A. Ross, M.D.
Allan M. Butler, M.D.	Joseph J. McGovern, M.D.	Robert T. Sceery, M.D.
Albert Cohen, M.D.	Alexander S. Nadas, M.D.	Mary Louise Scholl, M.D.
John D. Crawford, M.D.	Thomas C. Peebles, M.D.	Marion L. Slemmons, M.D.
William A. Dickson, M.D.	Murray E. Pendleton, M.D.	Nathan B. Talbot, M.D.
Philip R. Dodge, M.D.	William Pfeffer, Jr., M.D.	Wilhelmina VanDyke, M.D.
LeRoy L. Eldredge, Jr., M.D.	Charles V. Pryles, M.D.	Richard H. Watson, M.D.
Lawrence J. Essember, M.D.	Getrud C. Reyersbach, M.D.	Louis Weinstein, M.D.
Robert N. Ganz, M.D.	Robert H. Richie, Jr., M.D.	Thomas J. Whitfield, III, M.D.
Robert J. Haggerty, M.D.		Eleonore C. Zaudy, M.D.

ONE HUNDRED AND THIRTY-THIRD ANNUAL REPORT

Consulting Surgeons

Benjamin A. Barnes, M.D.	Edward Hamlin, Jr., M.D.	Grant V. Rodkey, M.D.
Marshall K. Bartlett, M.D.	Francis M. Ingersoll, M.D.	William P. Rogers, Jr., M.D.
Glenn E. Behringer, M.D.	Robert R. Linton, M.D.	J. Gordon Scannell, M.D.
Bradford Cannon, M.D.	Roy E. Mabrey, M.D.	Robert S. Shaw, M.D.
Edward D. Churchill, M.D.	William V. McDermott, Jr., M.D.	Richard H. Sweet, M.D.
Oliver Cope, M.D.	John B. McKittrick, M.D.	Howard Ulfelder, M.D.
Gordon A. Donaldson, M.D.	George L. Nardi, M.D.	William R. Waddell, M.D.
F. Thomas Gephart, M.D.	William C. Quinby, Jr., M.D.	Claude E. Welch, M.D.
Thomas H. Green, Jr., M.D.	John W. Raker, M.D.	Frank C. Wheelock, Jr., M.D.
Hermes C. Grillo, M.D.	George S. Richardson, M.D.	Earle W. Wilkins, Jr., M.D.

Consulting Neurosurgeons

H. Thomas Ballantine, Jr., M.D.	William H. Sweet, M.D.
	James C. White, M.D.

Consulting Orthopedists

Otto E. Aufranc, M.D.	Robert J. Joplin, M.D.
Joseph S. Barr, M.D.	Paul L. Norton, M.D.
Thornton Brown, M.D.	Eugene E. Record, M.D.
William N. Jones, M.D.	John A. Reidy, M.D.
	David D. Rutstein, M.D.

Consultant in Pharmacology

Otto Krayer, M.D.

Consultants in Preventive Medicine

John E. Gordon, M.D.
David D. Rutstein, M.D.

Consulting Urologists

Sylvester B. Kelley, M.D.	Wyland F. Leadbetter, M.D.
Walter S. Kerr, M.D.	Howard I. Suby, M.D.
	Lorande M. Woodruff, M.D.

Consulting Endoscopist

Edward B. Benedict, M.D.

Consulting Pathologists

Benjamin Castleman, M.D.
Richard B. Cohen, M.D.
Winfield S. Morgan, M.D.
Robert E. Scully, M.D.

Donald C. Sniffen, M.D.
David Spiro, M.D., Ph.D.
Edgar B. Taft, M.D.
Austin L. Vickery, Jr., M.D.

Consulting Radiologists

Milford D. Schulz, M.D.	
Laurence L. Robbins, M.D.	Stanley M. Wyman, M.D.

Consulting Bacteriologists

Louis Dienes, M.D.
Lawrence J. Kunz, Ph.D.

MASSACHUSETTS EYE AND EAR INFIRMARY

Treasurer's Report

BALANCE SHEET

September 27, 1959

ASSETS

Cash in Bank and on Hand	\$ 671,462.40
Investments—Book Value:	
Securities	\$ 4,296,193.37
Interest in parcel of real estate	1.00
Interest in unsettled estate	1.00
Sealed envelope	1.00
	<u>4,296,196.37</u>
Accounts Receivable:	
Patients—less reserve for doubtful accounts	\$ 162,811.41
Miscellaneous	<u>5,033.68</u>
	167,845.09
Inventories of Supplies, etc.	39,938.13
Plant:	
Land and buildings acquired prior to	
January 1, 1949 (book value)	\$ 491,741.99
Additional facilities acquired since	
January 1, 1949 (cost)	<u>2,459,830.68</u>
	\$2,951,572.67
Less: Reserve for depreciation	<u>675,465.00</u>
	2,276,107.67
Construction in Progress	190,988.27
TOTAL	<u>\$7,642,537.93</u>

LIABILITIES AND FUNDS

Advances from Patients	\$ 626.96
Accounts Payable and Accruals	123,826.30
Special Funds	801.31
General Fund	3,373,856.34
General Pension Reserve	289,536.22
Research Fund	8,085.31
Permanent Funds—Income Restricted	1,075,397.30
Permanent Funds—Income Unrestricted	2,423,962.54
Special Purpose Funds	278,649.70
Unexpended Restricted Income of Permanent Funds	67,795.95
TOTAL	<u>\$7,642,537.93</u>

ONE HUNDRED AND THIRTY-THIRD ANNUAL REPORT

INCOME ACCOUNT

for the period ended September 27, 1959 (52 weeks)

Hospital Income as per Director's Report	\$2,235,326.29
Hospital Expenses as per Director's Report (including provision for depreciation—\$138,000)—See Note	2,537,822.00
Excess of Hospital Expenses Over Hospital Income	\$ 302,495.71
Income from Investment Securities, less Income Applicable to Restricted Funds and to General Pension Reserve	\$183,246.30
Receipts from United Community Services, Committee of the Permanent Charity Fund, Inc., Estates of Elisha V. Ashton, G. Gorham Peters and Others	56,399.00
Less: Treasurer's Disbursements	\$239,645.30
DEFICIT FOR THE PERIOD	15,237.37
	224,407.93
	\$ 78,087.78

Note: During the period, hospital operating expenses aggregating \$54,433.74 were charged directly against principal and income of Permanent Funds as follows:

Principal	\$42,010.97
Income	12,422.77
Total	<u>\$54,433.74</u>

AUDITORS' CERTIFICATE

Massachusetts Eye and Ear Infirmary
Boston
Massachusetts

We have examined the balance sheet of MASSACHUSETTS EYE AND EAR INFIRMARY as at September 27, 1959 and the related income account for the period ended at that date (52 weeks).

Our examination was made in accordance with generally accepted auditing standards and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

The accompanying statements reflect a provision for depreciation in the amount of \$138,000, based on a percentage of the patient care expenses of the Infirmary. This provision has been recorded in accordance

with the requirements of statutory authority pertaining to per diem reimbursement for hospital services rendered under contract with certain third party agencies. We are unable to express an opinion as to the adequacy of the provision for depreciation in relation to plant costs.

Subject to the exception noted above, in our opinion, the accompanying balance sheet and related income account present fairly the financial position of Massachusetts Eye and Ear Infirmary at September 27, 1959 and the results of its operations for the period ended at that date, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding period.

Boston, Massachusetts
December 2, 1959

PATTERSON, TEELE & DENNIS

MASSACHUSETTS EYE AND EAR INFIRMARY

SUMMARY OF INVESTMENTS

(As of September 25, 1959)

GENERAL FUND	Book Value*	Market Value*	% of Market Value
BONDS:			
U. S. Government	\$1,315,100	\$1,245,300	17.1
Canadian Government	53,000	47,600	0.7
Railroad	152,303	118,650	1.6
Public Utility	244,914	221,840	3.0
Industrial	283,405	261,650	3.6
Financial	16,851	15,130	0.2
Miscellaneous	1,900	not valued	—
TOTAL BONDS	\$2,067,473	\$1,910,200	26.2
TOTAL PREFERRED STOCKS	\$ 141,929	\$ 159,400	2.2
COMMON STOCKS:			
Railroad	\$ 136,383	\$ 291,985	4.0
Public Utility	416,833	924,581	12.6
Industrial	927,432	2,830,481	38.7
Bank and Finance	290,604	526,352	7.2
Insurance	191,769	457,915	6.3
Investment Trust	25,000	51,675	0.7
TOTAL COMMON STOCKS	\$1,988,021	\$5,082,989	69.5
TOTAL GENERAL FUND	\$4,197,423	\$7,152,589	97.9
WINTHROP FUND	\$ 88,270	\$ 144,202	2.0
WEBER FUND	\$ 10,500	\$ 10,141	0.1
GRAND TOTAL	\$4,296,193	\$7,306,932	100.0%

*Cents omitted

OPERATING ANALYSIS

for the period ended September 28, 1959 (52 weeks)

Income from Patients	\$2,399,915.07
Income from Other Sources	119,887.04
TOTAL GROSS HOSPITAL INCOME	\$2,519,802.11
Allowances to Patients for "free care"	160,305.34
Further Deductions for Bad Debts	5,179.32
Allowances to Blue Cross and Other Agencies	118,991.16
TOTAL FREE SERVICE	\$ 284,475.82
NET INCOME	2,235,326.29
Salaries and Wages	\$1,412,642.56
Supplies and Expenses	710,511.17
Clinic Expenses	250,149.20
Extraordinary Expenses	26,519.07
TOTAL OPERATING EXPENSES	\$2,399,822.00
DEPRECIATION	\$ 138,000.00
HOSPITAL DEFICIT	164,495.71
TOTAL HOSPITAL DEFICIT	\$ 302,495.71

HORACE W. FROST
Treasurer

ONE HUNDRED AND THIRTY-THIRD ANNUAL REPORT

Administration

Chaplain Service

Chaplain Rev. Bruce Jones

Development and Resources

Nursing Department

Director of Nursing Service and Nursing Education Mrs. Margaret Verrill, R.N.
Assistant Director of Nursing Service Pauline Metras, R.N.

Directors of Departments and Units

Directors of Affiliated Departments

Director, School of Nursing and Nursing Service Ruth Sleeper, R.N.
Director of Dietetics, School of Dietetics Louise Hatch
Maintenance, Assistant Joseph W. Degen
Medical Records Mary E. Converse
Personnel Director Edmund R. Mattos

Comparative Statistics

HOSPITAL

	1958	1959
Service Patients — Eye Cases	1,475	1,451
Ear, Nose and Throat Cases	1,695	1,613
<i>Total Service Patients Admitted</i>	<u>3,170</u>	<u>3,064</u>
Private Patients — Eye Cases	2,869	3,124
Ear, Nose and Throat Cases	2,638	2,826
<i>Total Private Patients</i>	<u>5,507</u>	<u>5,950</u>
<i>TOTAL PATIENTS ADMITTED</i>	<u>8,677</u>	<u>9,014</u>
Operations, Service — Eye Cases	1,507	1,392
Ear, Nose and Throat Cases	1,334	1,355
Operations, Private — Eye Cases	2,543	3,258
Ear, Nose and Throat Cases	3,034	2,761
<i>TOTAL OPERATIONS</i>	<u>8,418</u>	<u>8,766</u>

CLINICS

New Patients — Eye Clinic	4,570	4,612
Ear, Nose and Throat Clinic	2,843	3,012
<i>TOTAL NEW PATIENTS</i>	<u>7,413</u>	<u>7,624</u>
Revisits — Eye Clinic	39,310	40,558
Ear, Nose and Throat Clinic	22,604	22,638
<i>TOTAL CLINICAL REVISITS</i>	<u>61,914</u>	<u>63,196</u>
Visits — Eye Clinic	43,880	45,170
Ear, Nose and Throat Clinic	25,447	25,650
<i>TOTAL CLINICAL VISITS</i>	<u>69,327</u>	<u>70,820</u>
Emergency Patients Admitted to Hospital	324	265
Patients Admitted to Emergency Ward	8,407	8,446

Comparative Statistics

	1958	1959
Patients Days Care — Service	19,567	19,465
Private	<u>29,478</u>	<u>32,137</u>
TOTAL PATIENTS DAYS CARE	49,045	51,602
Average Number of Patients Treated Daily —		
Service	54	54
Private	<u>81</u>	<u>88</u>
TOTAL AVERAGE TREATED DAILY	135	142
Average Number of Days Patients Remain — Service	6.2	6.3
Private	5.4	5.4
Beds Available and Percent of Occupancy — Service	80 68%	73 74%
Private	<u>89 88%</u>	<u>96 91%</u>
TOTAL BEDS AVAILABLE	169	169
Per Capita Cost Per Day — Service, Routine Care ..	\$23.40	24.04
Special Services	<u>9.22</u>	<u>9.89</u>
TOTAL COST PER DAY PER SERVICE PATIENT	\$32.62 (A)	33.93 (A)
Per Capita Cost Per Day — Semi-Private, Routine Care	26.00	\$26.71
Special Services	<u>10.25</u>	<u>10.99</u>
TOTAL COST PER DAY PER SEMI-PRIVATE PATIENT	\$36.25 (A)	\$37.70 (A)
Per Capita Cost Per Day — Private, Routine Care ..	\$29.90	\$30.72
Special Services	<u>11.79</u>	<u>12.65</u>
TOTAL COST PER DAY PER PRIVATE PATIENT	\$41.69 (A)	\$43.37 (A)
Condition of Service Patients on Discharge — Died ..	10	11
Autopsies	33%	45%
Left Against Advice	0	0
Discharged	3,170	3,036

(A) Overhead Ratio 27%.

MASSACHUSETTS EYE AND EAR INFIRMARY

The Clinics

Boston Eye Bank Serving New England

General Director — Garrett L. Sullivan, M.D.

Executive Secretary — Nancy A. Hunt

Executive Committee

Edwin B. Dunphy, M.D.

Henry Hixon Meyer

Brendan D. Leahey, M.D.

Mrs. Richard Cary Curtis

Mrs. William A. Slade, Jr.

Mrs. Virginia Gerould

Esophageal Voice Classes

Director — Mrs. Paul A. Doehler

Glaucoma Consultation Service

Director — Robert H. Trotter, M.D.

Retina Service

Director — Charles L. Schepens, M.D.

Winthrop Foundation and Clinic for the Deaf

Director — Donald K. Lewis, M.D.

Surgeons

Philip E. Meltzer, M.D.
Robert E. Klotz, M.D.

Francis L. Weille, M.D.
Bernard Zonderman, M.D.

Audiologist

Albert W. Koch, Ed.D.

Report of the President

THE longer I work for the Infirmary the more obvious it becomes that hospitals and industry have much in common and that the lessons learned by industry should be applied so far as possible in hospital administration. I have said this before, and it bears repetition.

We have, like industry, a product, patient care, for sale. Sooner or later, almost everyone will purchase it in considerable quantities. It is a prime necessity to the same extent as shelter, clothing and food, and without it needless suffering and loss of life will occur.

And again, like industry, our product in its manufacture consumes a veritable mass of items purchased in varying quantities, some large, some small, from countless sources. All of these materials must be stored, classified and made available for immediate use on demand. Of course, we differ here from industry in one respect. The lack of some essential material may close an industrial plant while in the case of a hospital, a similar failure may result in tragedy.

DAY AND NIGHT SERVICE

As with industry, we have employees — nearly five hundred of them — of sundry categories and many skills. All of them are needed to keep the wheels turning twenty-four hours of every day throughout the year and to meet each emergency promptly and efficiently as it arises when least expected. In this respect hospitals are like the utilities. When you press a switch, turn a faucet or lift a receiver, you procure immediate service, be it day, night or holiday. Whoever employs people has personnel problems and responsibilities: hiring, placement in the right job, training, opportunities for advancement, wage scales, hours of work, vacations and pensions, to mention a few. The fair and considerate treatment of employees and the efficient use of their services is characteristic of every successful venture, whatever its nature.

Industries and hospitals alike own buildings, machinery, equipment and other facilities. Though their nature may vary, they have much in common. All are expensive, they must be located in the most efficient manner and they must be utilized to the greatest possible extent. An idle tool, be it machine or bed, is productive only of loss.

And then there is research. What industrial enterprise without research is worth its salt? I am sure none of us would be content now to drive a Model T or heat our homes with a hand-fired coal hot air furnace, or for that matter to live without all the conveniences made possible by research. I am also sure that none of us would be satisfied with medicine, surgery and hospital care as it was practiced and provided in the Model T era.

There are, of course, many other similarities, but I believe I have mentioned enough to make my point. We must seek by all means, including research, continually to improve the quality of our product and the service we render to our patients; we must establish and maintain the closest possible controls in the purchase and storage of all the commodities used by the Infirmary; we must establish and maintain fair and considerate personnel policies; and we must utilize our facilities efficiently and to the fullest extent possible. By following these simple rules of industry, the Infirmary has increased and improved its services to the community at a cost which over recent years has compared favorably with the charges of other hospitals and has covered expenses of operation.

The staff and personnel of the Infirmary should all be proud of the parts they have played in this achievement.

HENRY HIXON MEYER
President



Report of the Director

THE past year was an extraordinarily active one for the hospital. The number of patients admitted, operations performed, X-rays taken, and patients seen in the Emergency Suite and Clinics all increased to the highest level in years.

To accomplish this increased activity and at the same time to maintain high standards of medical care has meant that every department in the hospital has had to step up its working efficiency to meet the new demands. There have been more meals prepared by the Dietary Department, more rooms made ready by the Housekeeping staff — everyone from Admitting Officers to Maintenance crew has shared in the added work load. Unfortunately, a Director's brief report must be made mostly in terms of statistics and costs and can only give an account of one or two hospital areas where the past year has seen significant changes.

Figures for the past seven years reflect several important trends:

	1953	1954	1955	1956	1957	1958	1959	Increase
Patients Admitted	6,790	6,958	7,076	7,718	8,054	8,677	9,014	33%
Operations Performed	6,300	6,560	6,620	7,318	7,799	8,418	8,766	37%
Clinic and EW Visits	66,843	66,239	69,360	69,309	72,195	77,734	79,266	18%
Total Patient Days	44,913	46,079	48,520	49,268	47,726	49,045	51,602	15%

These figures show a steady, if not rapid, growth in the use of hospital facilities in all areas. A breakdown of figures of patients admitted to the hospital shows a progressive increase in the number of private patients that more than counter-balances a small decrease in service cases.

MAXIMUM USE OF FACILITIES

There is every indication that this increasing demand will continue and that the hospital must expand its facilities. Pending such expansion, there will be a continuing effort to make better use of all available beds by eliminating, as far as possible, the peaks and valleys in occupancy now occurring over week-ends (average drop 17%) and during the vacation months of July and August and the holiday period over Christmas and the New Year.

The above statistics also clearly indicate that our patients are staying a shorter time in the hospital and that very nearly every patient comes to us for surgery. As a result, our ancillary facilities, such as operating rooms, anesthesia, X-ray, and laboratories, are being used to the maximum. This favorable financial factor, together with the expanding demand for beds—often

booked six weeks ahead, results in a relatively efficient operation compared to hospitals with less surgery and longer stay.

The Infirmary ended the year with a deficit of \$80,000 after depreciation. However, we can report that once again we had a surplus before depreciation which this year was \$60,000. As costs continued to rise (up 4% compared to the previous year), it was necessary to increase rates in February. In spite of this increase, our rates remain lower than comparable figures for other teaching hospitals in the area.

Although costs are expected to rise again in the coming year, there are some favorable indications that certain "third party" payments to the Infirmary will be increased to off-set some of these costs. Blue Cross has already agreed to add 2% to the hospital reimbursement in recognition of the need for replacement of worn-out equipment. This will mean an

additional payment by Blue Cross to Massachusetts hospitals of \$500,000 a year. Also the newly negotiated reimbursement formula with B.C., which goes into effect in April, will be considerably more favorable to the Infirmary.

Public Assistance payments are another area where improvement is expected. At present, the hospital is being paid \$25 for each patient coming to us for a tonsil and adenoid operation. As these patients stay with us for two days, the hospital cost for their care is over \$65. With the assistance of the Massachusetts Hospital Association, we hope to have the state laws governing welfare payments amended so that all hospitals will receive full per diem reimbursement.

RISING WAGE SCALES

Wages continue to be the major operating expense of the hospital representing 66% of total costs. Several changes were made during the year to liberalize our personnel policies, the most important being the decision in August to pay all employees time-and-a-half for overtime above 40 hours per week. Also, compensatory time off or pay is now given if a holiday falls on the employee's regular day off or during his

ONE HUNDRED AND THIRTY-THIRD ANNUAL REPORT

vacation. There were a few other minor changes to eliminate inequities in the interpretation of employment policies between departments.

As a result of a comprehensive wage survey in Boston and New England areas made by the Personnel Department of the MGH, changes were made in some of the hospitals' pay scales particularly in the lower income group. At present, personnel practices and wage scales compare favorably with competing labor markets in our area. Fringe benefits, now amounting to nearly 19% at the Infirmary, are often overlooked. Certainly, the day when dedicated hospital employees had to reconcile themselves to being underpaid is past. We had reasonable success during the year in getting and holding personnel.

In the Nursing Department, I am pleased to report a full quota of nurses who are giving our patients considerably more hours of nursing care than the national average. This is desirable because of the acute condition of the majority of our patients during their relatively short hospital stay. Two innovations tried in the Department have proved beneficial.

We have taken our busiest and largest 40-bed floor, the third, and put a retired registered nurse in the position of secretary. Here she takes care of all the doctors' orders, the paper work, ordering of drugs, thus relieving the head nurse of these responsibilities so that she can be in closer touch with the management of the patients.

Secondly, a coordinator of staff education was appointed. The main duties of this nurse are the orientation and supervision of new staff duty nurses on the floors. It has been found that these nurses, when they first come to us, are often unhappy and uncomfortable because they have not had enough recent training in our specialty. With the help and close supervision of the coordinator, a new nurse quickly gains a sense of security and confidence in her work which tends, in turn, to keep her in the employ of the Infirmary, happy in her job.

EMERGENCY SERVICES

As predicted, one of the fastest growing units of the hospital is the Emergency Suite, constructed three years ago directly off the front entrance. In the morning when emergencies are seen in the Clinics, these rooms are available to staff doctors for examination and minor surgery for their private patients. In both capacities, the Emergency Rooms have proved most effective with 8,400 visits recorded for the past year. This increased use called for additional personnel, and at present, two nurses are on duty from 7 A.M. to 11 P.M., at which time the night supervisor takes over. A secretary from 1 P.M. to 9 P.M. handles the many clerical details.

Although we are sure this unit fills a real community need, there are some problems yet unsolved. We find more and more persons coming for minor

ailments which can in no way be considered emergencies. Should we screen these patients and request them to return to our Clinics the next day? Also, we find an increasing number of night-shift employees arriving as they get through work. A mounting number of EW visits are recorded over week-ends and holidays because then patients can receive medical attention without giving up time from work. So far we have been able to handle these patients and get them all seen by a doctor. However, present quarters are becoming cramped and if the increase continues, plans for expansion will be necessary.

The present charge for an emergency visit is \$5, compared to \$3.50 for a Clinic visit. For the past year the unit approximately broke even financially.

DEVELOPMENTS IN RESEARCH

Another active hospital area has been the research laboratories. Paralleling the rapid growth of research in the nation, the laboratories of the Infirmary have been expanding their facilities and personnel. At present, nearly \$500,000 is being spent on research within the hospital. The total number of personnel in these laboratories — doctors, PhDs., technicians and secretaries, is about 70 and they are taking part in 38 separate research projects.

With the present large amount of money appropriated by the Government for research, it is relatively easy to get grants for the projects going on in our laboratories but it is most difficult to obtain money for construction and for the security of permanent research personnel. This problem of security for full-time research workers is one that must be solved. They should not have to rely on year-to-year grants but should, in some way, be given reasonable assurance that their work here will be permanent.

This and other administrative problems, such as providing and assigning space for a growing research program, are taking more and more time of the two Chiefs and the Administrator. How to set up the proper ground rules for efficient organization and control of research without depriving the individual laboratories of the freedom necessary for good work is one of the pressing questions waiting for solution. We are proud of our growing accomplishments in research but feel the time has come for a review of our policies so that we can look forward to orderly and continued development in the next decade.

Pressure for additional research space grew to the bursting point during the year and many hours were spent by the Chiefs in trying to rearrange space to fit in two new laboratories and the necessary expansion of a third. To find space adjacent to the hospital, several buildings were investigated before it was decided to purchase 90-92 Charles Street, within easy walking distance. As the purchase was not made until September, no decision on the best use of this property was made as the fiscal year ended.

MASSACHUSETTS EYE AND EAR INFIRMARY

NEW IMPROVEMENTS

Of the improvements either started or completed during the year, the most important was the final steps in the renovation of the X-ray department. The new machines and developing and viewing equipment greatly added to the efficiency of the department and the care and comfort of the patients.

The new Central Supply room completed its first full year and has proved most satisfactory. Gas sterilization was added and is being used more and more on such items as blankets and anesthesia equipment which do not lend themselves to steam sterilization.

Plans are well along for the installation of a central dictation system direct to the record room from any telephone in the hospital. We feel certain that this will prove a great convenience for the doctors and at the same time, make it easier for the Medical Records transcription department. It will also eliminate transporting the transcription discs to the record room.

A review of our whole electrical system was accomplished. Now plans are being made, in cooperation with the MGH, to install a standby generator to assure emergency lighting service in case of a major power breakdown.

One of the most successful improvements during the year was accomplished by the Ladies Visiting Committee. Entirely through their efforts and without cost to the hospital, the Trustees' Room was completely redecorated. As the year closed, the LVC was about to make similar renovations in the main waiting area and in the patient-visiting rooms on each of the four floors. These activities, undertaken in addition to their many contributions to patient and personnel welfare and comfort, once again prove the indispensability of our Ladies Visiting Committee.

FRANCIS S. HILL
Director

1960 Service Awards

Members of the Medical Staff who have served 25 consecutive years on the active staff:

David G. Cogan, M.D.

*Director of the Howe Laboratory
of Ophthalmology*

John R. Richardson, M.D.

*Surgeon for Bronchoscopy and
Esophagoscopy*

Thirty Year Pin:

Miss Rachel Crocker
Admitting

Ten Year Pins:

Mrs. Ruth Gutteridge, R.N.
Admitting

Robert McLaughlin
Optical Shop

Timothy Driscoll
Housekeeping

Lloyd Ramsdell
Nursing

Miss Sophie Marcus
Housekeeping

Miss Theresa Whitford
Nursing

Department of Otolaryngology

THE Otolaryngological Service for the first eight months of the past year functioned under the direction of Dr. LeRoy A. Schall. Dr. Philip E. Meltzer was appointed Acting Chief on September 1, 1959, and this report is a resume of individual reports submitted to the interim Chief by the heads of the many different sections of the ENT Service.

During the year the Service had its total complement of 12 residents in the training program under Dr. George F. Reed. In addition to the House Officers in the regular program, Dr. Geza Jako has been in his second year of post-residency training in research and teaching under a US Public Health Service special clinical traineeship, and Dr. Floyd Goffin has taken a pre-residency year in the Eaton-Peabody Laboratory on a one-year research fellowship. Following his regular three-year training program, Dr. Goffin will take an additional year in research and teaching.

During the year three residents, Drs. Snow, Pierce and Gulick, received support from the US Public Health Service training grant program. The purpose of this program is to develop career teachers and investigators in otolaryngology, and residents chosen, after receiving their extra training, agree to spend an additional year in research training either at the Infirmary or some other well-known research institution.

CLINIC GROWTH

The ENT Clinics continued to grow in census, with Dr. William A. Montgomery assisting in the coordination of clinic programs. The intensive work-up given to clinic cases seen by the medical students from Harvard compensates this group of patients for their active cooperation in the student training here.

The Infirmary's Tumor Clinic is held on Thursday morning in the MGH Tumor Clinic. As reported by Dr. Daniel Miller, this section had the most patient-visits of any of the subsidiary tumor clinics, seeing from 35 to 40 patients each Thursday morning. Cases are referred to the clinic by outside otolaryngologists and other physicians but the majority come originally through our ENT clinics or are referred by members of our own staff.

The two major tools for the cure or care of cancer — x-ray therapy and surgery — have improved greatly over the past 10 years and their specific and proper use in the light of present day knowledge has made the Otolaryngological Tumor Clinic staff optimistic on the basis of established results. Mrs. Ruth Adair of the Social Service staff is a most valued worker in the clinic and her help makes it possible

to accomplish a great deal for these patients and their families.

Teaching in the Tumor Clinic includes not only the residents on regular assignment but also nurses in our post-graduate course and certain student nurses in the MGH training course.

The Plastic Service under Dr. Edgar M. Holmes handles all maxillo-facial and plastic problems relating to the head and neck for both house and clinic patients. Before the close of the year, arrangements were made to have members of the Eye Plastic staff meet jointly with the ENT Plastic Service at the regular Thursday morning clinic sessions to share ideas for improving techniques and treatment.

During the year a series of lectures on plastic surgery was given to the House Officers as part of their training program. These lectures will be repeated yearly so that all residents will have a basic understanding of the problems and procedures in plastic surgery before assuming responsibility on this Service.

Nation-wide interest in Mrs. Paul A. Doehler's speech classes for laryngectomy patients was greatly enhanced by the article about her in the "Reader's Digest" in January 1959. Requests for her to lecture and give class demonstrations continue to grow and in the past year she addressed student groups at the Harvard Medical School, University of Massachusetts and the nursing schools at Boston College, Boston University and Simmons College. She has also given lectures on esophageal speech to graduate students at Boston University and has taken part in a seminar on rehabilitation at Boston College.

Mrs. Doehler gave instruction to 116 new laryngectomy patients during the year as well as teaching "students" who were continuing their speech lessons or receiving more advanced instruction. She has regular classes every day, Monday through Saturday morning, at the Infirmary and additional teaching, sessions on Wednesday evening in Manchester, New Hampshire, and Saturday afternoon in Providence, Rhode Island, all free to patients under Cancer Society auspices. In addition, she makes daily rounds to cancer of the throat patients in the Infirmary and has interviews with those facing the laryngectomy operation and their families.

The Audiology Department under Dr. Albert E. Koch, by fully utilizing its personnel, was able to average 40 hearing tests a day or approximately 10,000 tests during the year. Such hearing tests are done not only for Infirmary patients both in the house and in the clinics but also for patients at the MGH

and for a number of cases referred by private physicians for hearing studies.

FREDERIC WINTHROP FOUNDATION

Dr. Philip E. Meltzer resigned as Director of the Frederic Winthrop Foundation and this position was taken over by Dr. Donald K. Lewis who reported that during the year comprehensive hearing tests were given to all Foundation patients. In addition to routine testing, several differential diagnostic work-ups are carried out each month on young linguistically disturbed children. Psychogalvanic skin resistance equipment, used in conjunction with Boston University, has proved useful in testing young children when other means have failed. The Foundation's social workers, Miss Sylvia Segal and Miss Barbara Maguire, and Dr. Robert Berk, psychologist, have been invaluable in all patient contacts.

Members of the Foundation staff participated in a Public Health Grant, sponsored by the United Community Services, to study the needs of the Greater Boston area in terms of speech and hearing facilities available. In the resulting report one of the major recommendations was to establish a speech and hearing center in the area, and it was further recommended that the ideal location would be the Massachusetts Eye and Ear Infirmary so that patients with such problems would be seen in a medical framework. The means for organizing and initiating the center is now under study.

Under the auspices of a grant from the Noonan Memorial Fund, the Foundation is carrying out a team project for the etiology, diagnosis and treatment of psychogenic deafness in children. This study is conducted jointly with the MGH Department of Child Psychology.

An evaluation of the latest surgical procedures for the treatment of deafness due to otosclerosis is being made by the Foundation surgical team. These procedures include complete stapedectomy with prosthetic replacement of the stapes by means of tissue grafts held with polyethylene tubing, or steel or tantalum wire. A study has also been initiated of the effects of stapedectomy on speech reception and auditory discrimination. During the past year the clinic load of patients seeking surgical relief of deafness due to otosclerosis increased tremendously and there was a waiting list of over 115 cases.

LABORATORY AND RESEARCH EXPANSION

The Histopathological and Clinical Laboratories under Dr. Werner Mueller reported a very productive year with 1209 specimens done as compared with 996 in the previous year. The Laboratory is now giving practically 24-hour service on all biopsies. New equip-

ment has been installed to make it possible to turn out this amount of work, and a third technician has been added so that there is coverage from 7 A.M. to 11 P.M. Monday through Friday and on Saturday till 2:30 P.M.

In the Temporal Bone Laboratory, Dr. George Kelemen continued his investigation of pathology in congenital deafness and his collection of human temporal bones from fetuses now numbers more than 50 cases. Studies by Dr. Kelemen of the comparative anatomy of the larynx were also continued, currently centering around the vocal organ of the howling monkey.

Dr. Robert S. Gohd in the Virus Laboratory has worked out a method of growing influenza viruses on a single layer of epithelial cells. This method is being used to develop viral vaccines which should be several thousand times more pure than those now in use, and to determine how and in what manner viruses attack and destroy individual cells. The development of a purer vaccine may prove to be an outstanding and important contribution in the field of virology and several pharmaceutical firms have indicated a keen interest in this finding of Dr. Gohd.

Dr. John Irwin, Coordinator of Otolaryngological Research and Director of the Microcirculatory Laboratory, continued his work on the study of the circulation of the inner ear fluids. Pressures recorded in living animals show that the pressure of endolymph is less than that of perilymph. It would seem that Reissner's membrane must be under active biological tensions. Dr. John Walter and Dr. Geza Jako introduced frozen section techniques to aid in the study of the origin and absorption of perilymph and endolymph.

Dynamic pressuregrams of the pulmonary circulation have been secured in rabbits. It is of interest that the pressure in the right ventricle of the heart is not much greater than in a pulmonary arteriole of 100 micra. The great drop in pressure in the pulmonary circuit evidently appears between microarterioles and microvenules.

The whole laboratory was interested in the rabbit ear chamber techniques introduced during the summer by Dr. Gordon Sanders of Oxford University, England. This method has been used to study inflammation which again assumes importance as bacteria become resistant to antibiotics.

The interest in the reaction of blood vessels and their contents to allergic reaction continued. Techniques introduced by Dr. Walter are being used to identify the "hyaline" emboli which appear in the circulation during anaphylaxis. Such emboli might be important in inner ear pathology.

The Eaton-Peabody Laboratory of Auditory Physiology is run jointly by the Massachusetts Institute of

Technology and the Infirmary and is headed by Professor Walter A. Rosenblith with Dr. Nelson Kiang as principal investigator. During the past year simultaneous measurements of pressure and steady endo-cochlear potentials have been made. Dr. Goffin has recorded simultaneously cochlear microphonics, neural potentials, and steady potentials while injecting ionic solutions, metabolic inhibitors and drugs. This work may well show what drugs are of use in diseases of the inner ear. Dr. Kiang has continued his study of single unit responses in the auditory system which could lead to a better understanding of how we hear.

Dr. John Neame has placed gross electrodes on the cochleas of cats so that recording can be made in unanesthetized animals. Because of this work, the effects of anesthesia on neural responses can be studied.

The Research Histology Laboratory under Miss Sandylee Weille serviced all the ENT research laboratories, working with tissues of experimental animals. Dr. Walter and Dr. Kiang have added new techniques and helped to make this a functioning and useful laboratory always ready to try out new ideas.

Improved ideas for the better care of experimental animals were constantly tried out and studied in the research animal farm. The farm is cleaned daily and here there are no holidays. Mr. Charles Evans built this unit into an outstanding laboratory and Mr. Frank Bush has continued with the demanding work.

In July, 1959, Dr. S. Peter Marfey came to the Infirmary from the Rockefeller Institute to establish a Biochemistry Research Laboratory. With the financial support of Mr. Frederic Winthrop and the Winthrop family, Dr. Marfey has been able to design a laboratory that will be equipped with the most modern facilities and by early next year this new laboratory should be fully staffed and forging ahead. New micro-chemical methods will be emphasized in the basic study of chemical phenomena associated with the structure and function of the ear in normal and pathological conditions.

PHILIP E. MELTZER, M.D.

Acting Chief of Otolaryngology

Department of Ophthalmology

THE activities of the Ophthalmic Department continue to grow. The Eye Clinic and all its subdivisions reflect this increased activity in greater number of patients seen. Not only are more patients coming to the Clinic, but these patients are being studied more extensively, with the result that considerable congestion takes place. Steps are being taken to remedy this by modernizing the area with individual examining units, which will cut down the patient traffic quite a bit.

House admissions are also sharply up, and in the operating rooms 4,516 eye operations were performed, an increase of 466 over last year. The Infirmary is literally bursting at the seams and more space is desperately needed.

GLAUCOMA CONSULTATION SERVICE

One of the busiest of the special services is the Glaucoma Consultation Service, where there has been a sharp increase in activity. Last year there were 3,384 patient visits, compared to 1,820 the previous year.

Dr. Robert Trotter now has working with him Dr. Raymond Harrison of England as Fellow in Ophthalmology and Dr. Jorge Silva F. of Santiago, Chile.

We are indebted to Dr. Paul A. Chandler for certain new equipment which has been provided by funds at his disposal. Two new Mueller electronic tonometers, two Esterline-Angus recorders, one applanation tonometer, one Zeiss and one Haag-Streit slit lamp and two Keeler ophthalmoscopes have been acquired.

In May 1959, the one week glaucoma course was repeated and was attended by 12 ophthalmologists from other parts of the country. This course was given by Dr. Chandler, Dr. Grant, Dr. Trotter, Dr. Donaldson, Dr. Pei-Fei Lee, Dr. Brockhurst, Dr. Sloane, Dr. Pippitt, Dr. Gehring, Dr. Lingeman, Dr. Lawlor and Dr. Tucker. Its success is attested to by the fact that it is already oversubscribed for next year.

RETINA SERVICE

Dr. Charles Schepens reports that a total of 1,916 patients were seen and 136 operations performed. This service acts as a consultation service for many retinal conditions aside from its main activity of retinal detachment.

In addition to the training given to the eye residents, the special training program has been intensified. Using the private retina patients, eight clinical

fellows were in training during the past year and were given the opportunity to examine and help operate on 1,004 cases. Members of the eye staff rotate on the Retina Service and the permanent staff of the Retina Service has organized a course of intensive training for practicing ophthalmologists, under the auspices of the New England Ophthalmological Society.

HOWE LABORATORY

Expansion of the Howe Laboratory quarters was begun this past year by the acquisition of additional space on the roof of the present building. This is being financed by the Massachusetts Lions Eye Research Fund and matching funds from the government.

Continuing his important studies of ocular hydrodynamics and glaucoma, Dr. Grant subjected several glaucomatous eyes to the same type of outflow studies as he had previously done for non-glaucomatous eyes. The site of obstruction was found to be the trabecular meshwork. Although often hypothesized as the site of abnormality in glaucoma, this is the first time that this localization has been verified by direct measurement.

Distortion of the ciliary body has been found to have critical significance in the formation of aqueous humor and to be a major factor in the hypotony of various post-operative states of the eye. Further studies on ocular hydrodynamics were aimed at affecting the outflow by various enzymes and developing fixatives which will permit histologic study but which will not change the outflow facility.

Histochemical studies by Drs. Kuwabara and Cogan have resulted in a demonstration of dehydrogenases in the retina that have important bearing on the energy utilization by this tissue. Other ocular tissues are now being subjected to the same enzyme studies. Further studies were also made on cystinosis with the histologic demonstration for the first time of cystine crystals in the cornea. Other histochemical studies included observations on the focal areas of scleral translucency which occur commonly in the elderly.

Lens metabolism continues to be a preoccupying interest of Dr. Kinoshita and his group. In the past year, a series of no less than 10 proteins was identified, whereas only three had previously been discovered. These studies, along with those on electrolyte distribution in the lens and its surrounding medium, lay the groundwork for what, it is hoped, will be the ultimate understanding of cataract formation.

The biochemistry of the retina is being studied by Dr. Futterman with the aim of pinpointing enzymatic activity in the submicroscopic particles of the retina.

Other activities of the past year in the Howe Laboratory have included measurement of the electric potential across the cornea, demonstration of cholinesterase in the ocular muscles, continuation of studies on fat formation in ocular and other tissues, miscellaneous clinical studies in the field of neuro-ophthalmology, chromosome tagging for the determination of cell survival in corneal transplants and the development of several optical devices, including a new type of fundus camera.

Teaching activities of the Howe Laboratory have included participation in the undergraduate curriculum at Harvard Medical School, the Basic Science Course in the graduate curriculum, special post-graduate courses in neuro-ophthalmology and in glaucoma, annual conference on ophthalmic biochemistry and miscellaneous lectures to various ophthalmologic and medical groups. Teaching atlases have also been prepared by Dr. Donaldson in the fields of neuro-anatomy, gonioscopy and corneal dystrophies.

HOWE LIBRARY OF OPHTHALMOLOGY

The Lucien Howe Library of Ophthalmology is supported jointly by the income of the Howe endowments and the Massachusetts Eye and Ear Infirmary. The attendance was greater than the previous year by 356 more patrons and the circulation greater by 102 items. The total holdings now stand at 6,263.

RETINA FOUNDATION

The research activities of the Retina Foundation have continued to increase during the past year. Studies on the vitreous body were concentrated on the separation and characterization of the soluble protein moiety, the distribution and polymerization of the hyaluronic acid moiety and *in vitro* studies on the vitreous cells. Comparative investigations were made on extra-cellular substance from different connective tissues.

Pursuing a long time interest in the physico-chemical characterization of hyaluronic acid, great emphasis was placed last year on studies of light-induced depolymerization of this substance.

Research on the cornea has been intensified in two areas. The study of corneal fine structure was extended into the region of the limbus and an investigation of pathological and scarred corneas has begun. The second area of research was the biochemistry of wound healing and swelling in corneal tissues.

The scope of the investigations at the Retina Foundation laboratories has been increased by the formation of a muscle research unit under the direction of Dr. J. Gergely. Dr. A. Martonosi has joined the staff and is doing research on the biochemistry of muscular contraction.

ONE HUNDRED AND THIRTY-THIRD ANNUAL REPORT

The new nuclear magnetic and electron spin resonance laboratory has started operating during the past year and studies on the interaction between water and macromolecules are currently being performed.

In applied eye research, retinal detachment surgery has witnessed two major developments during the past year: the adoption of polyesters fiber for buried sutures and the use of silicone for implantation over the area of retinal breaks.

Progress has been made in the development of several instruments; namely, a new stereoscopic indirect ophthalmoscope, an ultrasonic detector specially designed to delineate certain anatomical features in the eye and an improved photocoagulator.

Studies in retinal sensitivity have been continued with special emphasis on measurements of glare and on the investigation of patients with retinal detachment.

The Retina Foundation continues to participate in the teaching of the basic science course and the residents' program. In addition, it has continued an extensive teaching program of clinical fellows. In the basic research unit, the training program for research fellows was considerably increased.

OPHTHALMIC PLASTICS LABORATORY

This laboratory, under the direction of Dr. William Stone, Jr., has continued its studies of wound healing of the cornea. Dr. Seymour Zigman, the E. B. Dunphy Fellow of this year, assisted by Dr. Norman Gold of Children's Hospital, is studying the nucleic acid metabolism of the normal and injured cornea to determine how changes affect corneal healing.

Studies of why certain tissues, notably cornea, are transparent are being studied with the help of Dr. Farida Saad, a new member of the laboratory staff, and Dr. Bernard Gould of the Massachusetts Institute of Technology. Differences in collagens between corneae of various animals, between opaque and clear corneae, and between cornea of other clear tissues, as swim bladders of fish and nictitating membranes of diving birds, are being studied. Changes in collagens in various types of corneal transplants are being investigated to try to determine why some transplants lose their transparency.

The work of the previous year on osmotic pressure changes in the elasmobranch eye have been corroborated. The osmotic pressure of the plasma of this species is markedly higher than the aqueous. The reverse is true in mammals. Drs. Hugh Davson and D. F. Cole of London will be working this summer with the laboratory to continue this work, which may suggest some interesting changes in the theories of the formation of fluids of the eye.

The study of the plastic artificial cornea has been concentrated in rhesus and doracouli monkeys for the past year. Patient surveys are in progress to determine the most acceptable patients for the first human studies when this becomes feasible.

In the glaucoma surgery study, work has become concentrated in the use of silicone rubber drainage tubes. Dr. John Sebestyen is helping with this work. Recently a tube was devised which shows promise. It is hoped that further study will confirm the preliminary successes in this most important field for the prevention of blindness.

The first model of the hydraulically operated surgical microscope was completed and reported to the American Academy of Ophthalmology and Otolaryngology. A new model, with many improvements, has been designed and is in production.

Approximately one hundred forty prothesis on private and service patients were made by Mr. Raymond Jahrling of this laboratory.

The Massachusetts Lions Eye Research Fund, the Atomic Energy Commission, the Office of Naval Research and the National Institute of Health and some private benefactors have continued to support the work of this laboratory.

RETROLENTAL FIBROPLASIA RESEARCH

Dr. Zacharias is in the sixth year of a follow-up study of retrolental fibroplasia. The biochemical study, conducted by Dr. Futterman, has now been transferred to the Howe Laboratory.

THE BOSTON EYE BANK

During the past year more eyes were used for corneal transplants by the Boston Eye Bank than during any year of its history. Almost one hundred transplant operations were performed with the record one hundred ninety-seven eye donations, which the Eye Bank received from deceased donors.

The increased use of eye tissue for transplantation was attributed to several factors. These include the promising results obtained by using frozen tissue for lamellar grafts, thereby eliminating the necessity of operating soon after a donor's death. Another factor was the expansion of former restrictions which had prevented use of many eyes for transplant.

The record number of transplants has greatly reduced the supply of eyes urgently needed for research projects; consequently, the demand for more eye donations continues to exceed the supply. To help alleviate the increasing need, the Eye Bank has distributed some 14,000 registration forms to persons interested in donating their eyes after death. Three thousand new donors have brought to 12,500 the number of New Englanders now registered.

With the addition of ten new affiliates, there are one hundred eight New England hospitals currently cooperating in this program of sight restoration. The unselfish assistance of staff members in each of these hospitals is vital to the successful continuation of the Eye Bank's work.

Increases in all Eye Bank statistics indicate growing public awareness of the Eye Bank program. Public education projects included the use of subway car cards in Boston, newspaper feature stories and general news articles, public service announcements by many New England radio stations, and the presentation of some one hundred Eye Bank film programs to social, civic, medical and religious groups.

A non-profit, charitable organization, the Eye Bank gratefully received financial aid from the Charles Irwin Travelli Fund, the Richard Cary Curtis Fund, the Agnes L. Coffin Fund and from many anonymous donors. The Red Cross Motor Corps, airlines and railroads continued to provide free transportation of eye tissue.

Among the most enthusiastic Eye Bank supporters have been members of Rhode Island Lions Clubs. In conjunction with their sight conservation program, Rhode Island Lions distributed thousands of Eye Bank registration forms, proposed Eye Bank affiliation to local hospitals and presented the Eye Bank film to about 50 interested organizations.

ADOLPH EHRLICH EYE PATHOLOGY LABORATORY

The Adolph Ehrlich Eye Pathology Laboratory continues to flourish with a total of 609 specimens examined during the year. In addition to the regular residents rotating through this laboratory as part of their training, there are always one or two special fellows from other institutions, who come to us for special training in ophthalmic pathology. We hope to have an electron microscope installed, which will greatly increase our knowledge of pathologic tissue.

PORTR BACTERIOLOGICAL LABORATORY

The routine work of the Porter Bacteriological Laboratory has almost doubled, but, in spite of this,

continued investigation has been in progress on aseptic techniques and sterilization procedures. The laboratory performs an important function in the constant battle against hospital infections.

SOCIAL SERVICE AND OCCUPATIONAL THERAPY

Special mention should be made of the quiet, efficient work of the Social Service Department in helping the patients with their problems and making the doctor's job easier. We regret the retirement of Miss Isabel Whiting, who has been the head of this department for a number of years. Her place has been taken by Miss Madeline Shipsey and under her direction the Department is making a survey of glaucoma patients.

The Occupational Therapy Department continues to render valuable service to house patients who are in for more than the average stay. A total of 556 eye patients were seen during the year and 3,554 treatments given.

OTHER ACTIVITIES

The Infirmary generously makes available its facilities to various medical groups such as the New England Ophthalmological Society, the Massachusetts Committee of the National Society for the Prevention of Blindness, etc.

Of special interest was the symposium and work shop on Limited Vision which took place at the Infirmary in September 1959. This was co-sponsored by the Massachusetts Division of the Blind, The National Society for the Prevention of Blindness, The Massachusetts Council of Organizations for the Blind and the Infirmary itself. A full afternoon's program was organized chiefly through the efforts of Dr. Albert E. Sloane, and a capacity crowd of social workers, nurses and doctors attended.

EDWIN B. DUNPHY, M.D.

Chief of Ophthalmology



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SWEEBE, Edward C. and Cogan, D. G., "Adenocarcinoma of the Meibomian Gland: A Pseudo-Chalazion Entity." *A.M.A. Arch. Ophth.* 61:282-290, Feb. 1959.

Szirmai, J. A. (See BALAZS, Endre A.)

TOTH, Laszlo Z. J., "The Sterilizing Effect of Ethylene Oxide Vapor on Different Micro-Organisms." *Arch. Microbiol.* 32:409-410, May 1959.

TUCKER, Donald P., "Blue Sclerotics Syndrome Simulating Buphtalmos." *Am. J. Ophth.* 47:345-348, March 1959.

Varga, Laszlo (See BALAZS, Endre A.)

VERHOEFF, Frederick H., "A Normal Frontal Plane Horopter Discovered by Means of a New Device, the Horopter Finder." *A.M.A. Arch. Ophth.* 61:298-307, Feb. 1959.

VERHOEFF, Frederick H., "Fixation Disparity." *Am. J. Ophth.* 48:339-441, Sept. 1959.

WEST, Francis J., "Ocular Role in Preventable Hemiplegia." *Carney Hosp. J.* 1:16-18, 1959.

WOLF, Ernst and Zigler, M. J., "Unicocular and Binocular Scotopic Responsiveness of the Peripheral Retina." *J. Optic. Soc. Am.* 49:394-398, April 1959.

Wolf, Ernst (See BROCKHURST, Robert J.)

Zigler, Michael J. (See WOLF, Ernst)



Directory

MEMBERS OF INFIRMARY STAFF, ALUMNI AND RESIDENTS



Names of members of the Infirmary Staff are printed in capital letters.

Abbreviations following the name indicate to what service of the Infirmary the individual belongs:

Anes.; Anesthesiology
Bron.; Bronchoscopy
Esoph.; Esophagoscopy

Laryn.; Otolaryngology
Oph.; Ophthalmology
Otol.; Otology

Letters in small type preceding the abbreviations indicate the special work of the individual:

a.; assistant
assoc.; associate
audiol.; audiologist
biochem.; biochemist
biol.; biologist
c.; chief of service
cons.; consulting
dir.; director

elect. eng.; electronics engineer
fel.; fellow
path.; pathologist
r.; resident
roent.; roentgenologist
s.; surgeon
s.p.o.; surgeon for plastic operations
sr.; senior

As of April, 1960

ADAMS, SAMUEL T., Oph. 1951
1610 Pine Ave. W., Montreal, Que., Canada
ADKINS, HOWARD E. (r. Oph.)
ALBAUGH, CLARENCE H., Oph. 1940
727 W. 7th, Los Angeles, Cal.
ALEXANDER, SEEYMAN L., Aural 1919
170 St. George, Toronto, Ont., Canada
ALLEN, HENRY F., (a.s. Oph.), Oph. 1949
200 Beacon, Boston, Mass.
ALLEN, JOHN H., Aural 1904
32 Deering, Portland, Me.
ALLMAN, CHARLES H. (sr. cons. s. Laryn.),
Laryn. 1930
520 Commonwealth Ave., Boston, Mass.
ALPERT, D. ROBERT (a.s. Oph.)
1101 Beacon, Brookline, Mass.
ANGELINI, HUGO D. (a.s. Laryn.), Laryn. 1951
3 Seaward Rd., Wellesley Hills, Mass.
ANTHONY, ALAN R., Oph. 1936
736 Granville, Vancouver, B. C., Canada
ANTHONY, MARC, Oph. 1929
508 Old Nat'l. Bank Bldg., Spokane, Wash.

ARSLAN, HIMLI (res. assoc. Otol.)
Sanborn Co., 175 Wyman, Waltham, Mass.
AYASH, JOHN J., Laryn. 1946
119A Main South, Minot, N. D.
BAHN, GUSTAV C., Oph. 1948
921 Canal, New Orleans, La.
BAIR, HUGO L., Oph. 1932
102 Second Ave. S. W., Rochester, Minn.
BALAZS, ENDRE A. (biochem. & assoc. dir.
Ret. Fd.)
30 Chambers, Boston, Mass.
BALLINGER, JOHN J., Laryn. 1943
636 Church, Evanston, Ill.
BARTON, RICHARD T., Laryn. 1945
9730 Wilshire Blvd., Beverly Hills, Cal.
BASSEN, EDWARD J., Oph. 1928
70 E. 66th, N. Y. C.
BAUER, FREDERICK, Aural 1902
BECHTEL, EDWARD J., Oph. 1957
419 N. Newport Blvd., Newport Beach, Cal.
BECK, PETER (a. Oph.), Oph. 1954
43 Austin, Portsmouth, N. H.

MASSACHUSETTS EYE AND EAR INFIRMARY

BEETHAM, WILLIAM P. (s. Oph.), Oph. 1929
108 Bay State Rd., Boston, Mass.

BEYER, NORMAN E. (fel. Oph.)

BIRDSELL, CLARENCE H., Aural 1916, Oph. 1918
26 Summer, Haverhill, Mass.

BLACK, DANIEL E., Laryn. 1944
174 Main, Nashua, N. H.

BOBBETT, GORDON H., Laryn. 1948
161 W. Cheeves, Florence, S. C.

BOGAN, FREDERICK L. (sr. cons. s. Laryn.)
Aural 1908
112 Stratford Rd., W. Roxbury, Mass.

BOIES, LAWRENCE R., Laryn. 1931
90 S. 9th, Minneapolis, Minn.

BOIES, LAWRENCE R., JR. (r. Laryn.)

BORUCHOFF, S. ARTHUR (a. Oph.)
192 Bay State Rd., Boston, Mass.

BRACONIER, HARRY E. (a. s. Oph.), Oph. 1945
1180 Beacon, Brookline, Mass.

BRADY, FRANK W. (fel. Laryn.), Laryn. 1942
8 Merrimac, Lowell, Mass.

BRANCO, ADOLFO, Laryn. 1958
Lemper Institute, 119 E. 74th, N. Y. C.

BREED, FREDERIC B. (a. s. Oph.), Oph. 1950
2 Winter, Salem, Mass.

BREWER, DAVID W., Laryn. 1948
1100 E. Genessee, Syracuse, N. Y.

BROCKHURST, ROBERT J. (a. s. Oph.),
Oph. 1951
99 W. Cedar, Boston, Mass.

BROWN, LESTER A., JR., Laryn. 1937
478 Peachtree, Atlanta, Ga.

BROWN, ROBERT M. (elect. eng. Otol.)
M.I.T., Cambridge, Mass.

BRYAN, BURTON D., Laryn. 1943
151 Rock, Fall River, Mass.

BULLINGTON, S. JAMES (a. Oph.), Oph. 1956
(leave of absence)
Geisinger Memorial Hospital, Danville, Pa.

BURKE, J. ROBERT, Oph. 1918, Aural 1919, Retired
465 Eighth Ave., N.E., St. Petersburg, Fla.

BURRAGE, WALTER S. (res. assoc. Otol.)
330 Dartmouth, Boston, Mass.

CALNAN, ARTHUR F. (a. Oph.)
534 Beacon, Boston, Mass.

CAMERON, WALTER C., Oph. 1930
740 St. Helens Ave., Tacoma, Wash.

CANDRAY, CARLOS H., Oph. 1944
San Salvador, El Salvador, C. A.

CARON, ARMAND L., Laryn. 1927
Medical Arts Bldg., Worcester, Mass.

CARROLL, FRANK D., Oph. 1935
635 W. 165th. N. Y. C.

CARROLL, JOHN (fel. Oph.)

CARROLL, WALTER J. E. (s. Laryn.)
5 Chestnut, Arlington, Mass.

CARTER, LELAND F., Oph. 1926
1553 Woodward Ave., Detroit, Mich.

CASE, PAUL H., Oph. 1938
550 W. Thomas Rd., Phoenix, Ariz.

CASTELLANOS, CARLOS A. (r. Laryn.)

CASTEN, VIRGIL G. (s. Oph.), Oph. 1931
412 Beacon, Boston, Mass.

CAVANAUGH, THOMAS (assoc. s. Oph.),
Oph. 1940
403 Commonwealth Ave., Boston, Mass.

CAVE, LINUS, S., Laryn. 1927
129 W. Borden Ave., Syracuse, N. Y.

CERRATO, CALVIN M., Laryn. 1944

CHAMBERLAIN, CALVIN B., Oph. 1944
174 Nemaha, Pomona, Cal.

CHANDLER, PAUL A. (sr. cons. s. Oph. & assoc.
dir. Oph. r. training), Oph. 1925
5 Bay State Rd., Boston, Mass.

CHAPMAN, RICHARD B. (a. Oph.), Oph. 1955
743 High, Dedham, Mass.
32 Greenleaf, Quincy, Mass.

CHASIN, WERNER D. (r. Laryn.)

CHISHOLM, JULIAN F., JR., (a. s. Oph.)
330 Dartmouth, Boston, Mass.

CICCARELLI, EUGENE C. (r. Oph.)

CLARKE, SAMUEL T., Oph. 1939
130 N. Virginia, Reno, Nev.

CLOUGH, JOSEPH M. (a. s. Oph.), Laryn. 1939
Oph. 1941
266 Beacon, Boston, Mass.

CLUBB, ROBERT W. (r. Laryn.)

COGAN, DAVID G. (s. Oph. & dir. Howe Lab.),
Oph. 1935
243 Charles, Boston, Mass.

COGAN, JAMES R., Oph. 1944
414 N. Camden Dr., Beverly Hills, Cal.

COLLINS, CLARK S., Laryn. 1959
709 Dunbar, Greenville, S. C.

CONTRERAS, JOEL (fel. Oph.)

CONVERSE, JOHN M., Laryn. 1938
722 Park Ave., N. Y. C.

COOPER, KEMP G., Laryn. 1940
3705 E. Colfax Ave., Denver, Colo.

CORDRAY, DAVID P., Laryn. 1940
350 N. Milwaukee Ave., Libertyville, Ill.

COVITZ, EDWARD E. (a. s. Oph.)
475 Commonwealth Ave., Boston, Mass.

COYLE, JOHN A., Oph. 1931
Norwich, Vt.

CREWSON, ARTHUR L., Laryn. 1927
132 Second, W. Cornwall, Ont., Canada

CRIST, ALAN (elect. eng. Otol.)

ONE HUNDRED AND THIRTY-THIRD ANNUAL REPORT

CRONIN, THOMAS P. (a. s. Oph.), Oph. 1950
94 Pleasant, Arlington, Mass.
270 Commonwealth Ave., Boston, Mass.

DAVIDSON, HERMAN P., Oph. 1920

DAY, KENNETH, Laryn. 1924
121 University Pl., Pittsburgh, Pa.

DEAN, ABBOTT M., Oph. 1929
536 First Ave., Council Bluffs, Iowa

DEBLOIS, ELIZABETH (a. s. Laryn.)
247 Commonwealth Ave., Boston, Mass.

DIPIERO, RANIERO (fel. Anes.)

DIETRICH, HERBERT J., Laryn. 1951
2035 Delancy Pl., Philadelphia 3, Pa.

DOHLMAN, CLAES-HENRIK (fel. Oph.)

DONAHUE, HUGH C., Oph. 1931
520 Commonwealth Ave., Boston, Mass.

DONALDSON, DAVID D. (a. Oph.), Oph. 1953
243 Charles, Boston, Mass.

DONOGHUE, WILLIAM F., Laryn. 1942, Oph. 1944
69 Chestnut, Springfield, Mass.

DOWLING, JOSEPH L., JR. (a. Oph.), Oph. 1957
207 Waterman, Providence, R. I.

DOWLING, JOSEPH L., SR., Oph. 1918
207 Waterman, Providence, R. I.

DOYLE, SAMUEL C., Laryn. 1957
20 Occom Ridge, Hanover, N. H.

DROOKER, J. CHARLES (s. Laryn.), Laryn. 1939
285 Commonwealth Ave., Boston, Mass.

DRURY, DANA W., Aural 1906
Sanderson Rd., Littleton, Mass.

DUCLOS, GASTON N., Laryn. 1943, Oph. 1945
1538 Sherbrooke, W. Montreal, Que., Canada

DUMAS, JEAN (fel. Oph.)

DUNPHY, EDWIN B. (c. Oph.), Oph. 1923
243 Charles, Boston, Mass.

EASTON, MAHLON T. (s. Oph.), Oph. 1936
70 Carlton, Brookline, Mass.

ERGIN, KAMIL (fel. Anes.)

ERNLUND, CARL H. (sr. cons. s. Laryn.),
Laryn. 1927
12 Bay State Rd., Boston, Mass.

EVANS, MAURICE G. (sr. cons. s. Laryn.),
Laryn. 1928
416 Marlborough, Boston, Mass.

EVANS, WILLIAM H., Oph. 1924
16 Wick Ave., Youngstown, Ohio

FARRELL, JAMES I., Oph. 1932
301 Kempf Bldg., Utica, N. Y.

FILMER, GEORGE A., Oph. 1939
227 16th, Denver, Colo.

FINK, ROBERT J., Oph. 1955
133 Hawthorne Rd., Hopkins, Minn.

FISHER, STANWOOD E., Aural 1909
338 Spring, Portland, Me.

FLOYD, PAUL E., Oph. 1946
2 Middle, Farmington, Me.

FODOR, JULIANA (fel. Oph.)

FOOTE, CHARLES M., Oph. 1940
412 N. Hastings Ave., Hastings, Neb.

FRACKLETON, RALPH J., Laryn. 1933
15701 Detroit Ave., Lakewood, Ohio

FRAME, STUART M., Laryn. 1956
216 Alexander, Rochester, N. Y.

FRANKLIN, C. RAY, Oph. 1931
10 E. 90th, N. Y. C.

FRAZEE, JOHN R. (s. Laryn.), Laryn. 1934
1180 Beacon, Brookline, Mass.
743 High, Dedham, Mass.

FRED, GUSTAVE B. (sr. cons. s. Laryn.),
Laryn. 1925
475 Commonwealth Ave., Boston, Mass.

FREEMAN, SUMNER L., Laryn. 1959
St. Luke's Hospital
421 W. 113th, N. Y. C., 25.

FREESE, CARL GATES, JR., (a. Oph.), Oph. 1958
328 Washington, Wellesley Hills, Mass.

FRIEDMAN, EPHRAIM (r. Oph.)

FUJITA, SHIRO (r. Laryn.)

FULTZ, WILLIAM E., Oph. 1927
Glace Bay, N. S., Canada

FUTTERMAN, SIDNEY (biochem.)

GABRIELS, JOSEPH A. D., Oph. 1921
481 Western Ave., Albany, N. Y.

GAUDREAU, HONORE E., Oph. 1930
293 Bridge, Springfield, Mass.

GEHRING, JOHN R. (r. Oph.)

GERMAIN, HARRY H., Oph. 1899
479 Commonwealth Ave., Boston, Mass.

GIFFORD, HAROLD, JR., Oph. 1934
1620 Medical Arts Bldg., Omaha, Neb.

GILBERT, JOHN J., Oph. 1917, Aural 1920
209 Angell, Providence, R. I.

GILLER, HERBERT, Oph. 1952
2040 W. Wisconsin Ave., Milwaukee, Wis.

GILLESPIE, ELMER H., Laryn. 1932
906 So. Fort Harrison Ave., Clearwater, Fla.

GINSBERG, JOSEPH, Oph. 1953
3115 Burnet Ave., Cincinnati, Ohio

GODUTI, RICHARD J., Oph. 1946
704 Congress, Portland, Me.

GOHD, ROBERT S. (res. vir.)
243 Charles, Boston, Mass.

MASSACHUSETTS EYE AND EAR INFIRMARY

GOLDCAMP, RICHARD R., Laryn. 1948
16 Wick Ave., Youngstown, Ohio

GOLDMAN, A. MILTON, Oph. 1924
Rockville, N. Y.

GOLDSTEIN, JACK E. (fel. Oph.)

GOODALE, ROBERT L. (sr. cons. s. Laryn.),
Laryn. 1926
330 Dartmouth, Boston, Mass.

GOODALL, EDWIN B. (a. s. Oph.), Oph. 1952
(leave of absence)
N. Main, Wolfeboro, N. H.

GOODELL, WILLIAM, Aural 1906
Halladay Ave., Suffield, Conn.

GOSTELI, JACQUES (biochem.)

GOTLIB, BERNARD N., Laryn. 1959
USAF Hosp., Weisbaden, APO 633, N. Y. C.

GRANT, W. MORTON (a. s. Oph.)
243 Charles, Boston, Mass.

GRAY, GERALD H., Laryn. 1929
418 Thirtieth, Oakland, Cal.

GRIFFEY, LOUIS E. (a. Laryn.), Laryn. 1957
25 W. Central, Natick, Mass.

GUIMARAES, JOAO C., Laryn. 1946
Rua David Campista 67, Botafogo, Rio,
Brazil, S. A.

GULICK, ROBERT P. (r. Laryn.)

GUNDERSEN, TRYGVE (s. Oph.), Oph. 1930
534 Beacon, Boston, Mass.

HACKING, RAYMOND F., Oph. 1927
105 Waterman, Providence, R. I.

HAGLER, WILLIAM S. (fel. Oph.)

HAKIM, ARCADIUS, Laryn. 1954
U. S. Naval Dispensary, Washington, D. C.

HALEY, WARREN D. (a. s. Oph.), Oph. 1950
78 Church, Winchester, Mass.

HALTON, EDWARD J., Laryn. 1942
337 Appleton, Holyoke, Mass.

HAPP, LINLEY C., Laryn. 1931, Oph. 1943
170 Waterman, Providence, R. I.
502 Newport Ave., Pawtucket, R. I.

HARDENBERGH, FIRMON E. (r. Oph.)

HARRISON, RAYMOND (fel. Oph.)

HAYDEN, WILLIAM (r. Laryn.)

HEATH, PARKER (sr. cons. Oph. Path.)
Sullivan Harbor, Me.

HEINE, LYMAN H., Laryn. 1927
635 N. Main, Freemont, Neb.

HEINICKE, HORST J., Laryn. 1948
116 W. Buffalo, Ithaca, N. Y.

HENNESSEY, WILLIAM W., Aural 1908
33 Essex, Salem, Mass.

HENRY, MORRISS M., Oph. 1959
602 Garrison Ave., Fort Smith, Ark.

HERM, ROBERT J. (a. Oph.), Oph. 1955
740 Main, Waltham, Mass.

HERMAN, EDWARDS W. (sr. cons. s. Laryn.)
Silver Hill Rd., Lincoln, Mass.

HICKS, JULIUS N. (r. Laryn.)

HILL, FREDERICK T., Aural 1916
111 Main, Waterville, Me.

HILL, JOHN M. (a. s. Oph.)
108 Bay State Rd., Boston, Mass.

HILL, KEVIN (r. Oph.)

HINCKLEY, RALPH (r. Oph.)

HIRSCH, LAWRENCE S. (a. Laryn.)
42 Lincoln, Framingham, Mass.

HO, ALBERT K. T., Laryn. 1949
Central Medical Bldg., Beretania & Kalakaua,
Honolulu, T. H.

HOBART, CARL, Oph. 1922
3601A Gravois Ave., St. Louis, Mo.

HOLLABAUGH, CHARLES F., Oph. 1932
1915 Church, Nashville, Tenn.

HOLMES, EDGAR M. (s.p.o.), Laryn. 1934
330 Dartmouth, Boston, Mass.

HOLT, LAWRENCE B., Oph. 1948
208-209 Reynolds Bldg., Winston-Salem, N. C.

HOOPLE, GORDON D., Laryn. 1926
1100 E. Genesee, Syracuse, N. Y.

HOUSTON, G. GILBERT, Laryn. 1938
170 Fitzroy, Charlottetown, P. E. I., Canada

HOWARD, DONALD O., Oph. 1941
201½ N. Main, Wichita, Kan.

HURLEY, PAUL D. (a. Oph.)
270 Commonwealth Ave., Boston, Mass.

HURST, ALFRED L. (a. Laryn.), Laryn. 1959
98 Adams, Milton, Mass.

IRELAND, PERCY E., Laryn. 1935
170 St. George, Toronto, Ont., Canada

IRGENS, EDWIN R., Laryn. 1938
519 Ship, St. Joseph, Mich.

IRVINE, A. RAY, JR., Oph. 1947
9730 Wilshire Blvd., Beverly Hills, Cal.

IRVINE, A. RODMAN, Oph. 1935
9730 Wilshire Blvd., Beverly Hills, Cal.

IRVINE, WENDELL, Oph. 1941
2010 Wilshire Blvd., Los Angeles, Cal.

IRWIN, JOHN W. (dir. Micro-Circ. lab & dir.
Laryn. Res.)
243 Charles, Boston, Mass.

JAKO, GEZA (fel. Laryn.)

JAKUS, MARIE (biol.)

JESBERG, NORMAN, Laryn. 1947
Eye & Ear Hospital, 500 S. Lucas Ave.,
Los Angeles, Cal.

JEWETT, EVERETT P., Oph. 1945
65 Elm, Worcester, Mass.

ONE HUNDRED AND THIRTY-THIRD ANNUAL REPORT

JOHNSON, CARL C. (assoc. s. Oph.) Oph. 1942
5 Bay State Rd., Boston, Mass.

JOHNSON, DAVID S., Oph. 1956
Hauser Clinic, 7411 Third Ave., Detroit, Mich.

JOHNSON, LOUIS L. (r. Oph.)

JOHNSON, LORAND V., Oph. 1937
10515 Carnegie Ave., Cleveland, Ohio

JONES, EDWARD E., Laryn. 1928
141 Elm, Brockton, Mass.

JUDD, DELBERT K., Laryn. 1934
187 S. Schuyler Ave., Kankakee, Ill.

KANT, ALFRED, Oph. 1948
40 Public Square, Watertown, N. Y.

KAUFMAN, HERBERT E. (r. Oph.)

KAZANJIAN, KENNETH A. (a. s. Laryn.)
475 Commonwealth Ave., Boston, Mass.

KAZANJIAN, VARAZTAD H. (sr. cons. s. p. o.)
475 Commonwealth Ave., Boston, Mass.

KELEMAN, GEORGE (res. assoc.)
243 Charles, Boston, Mass

KELLEY, VINCENT J. (s. Laryn.)
520 Commonwealth Ave., Boston, Mass.

KENNEALLEY, ELMER V., Oph. 1952
479 Main, Greenfield, Mass.

KENNEDY, MICHAEL F., Oph. 1927
1835 I, N.W., Washington, D. C.

KENT, CHARLES (assoc. s. Laryn.)
270 Commonwealth Ave., Boston, Mass.

KERN, HAROLD (biochem.)

KERST, J. ARTHUR, Oph. 1934
1211 S. 6th, Springfield, Ill.

KIANG, NELSON Y. (res. a. Otol.)

KING, DAVID G., Laryn. 1951
605 Commonwealth Ave., Boston, Mass.

KING, MERRILL J., Jr., Oph. 1956
22 White, Rockland, Me.

KING, MERRILL J., SR., (sr. cons. s. Oph.),
Oph. 1932
22 White, Rockland, Me.

KINOSHITA, JIN H. (biochem.)

KLOTZ, ROBERT E. (a. s. Laryn., a. to c. Laryn.
& a. s. Winthrop Fd.), Laryn. 1956
243 Charles, Boston, Mass.

KOCH, ALBERT E. (audiol.)

KOS, CLAIRE M., Laryn. 1941
University Hospital, Iowa City, Iowa

KUPFER, CARL (a. Oph.)
243 Charles, Boston, Mass.

KUWABARA, TOICHIRO (assoc. Oph. path.)
243 Charles, Boston, Mass.

LANE, CHARLES S., Laryn. 1949
1214 N. B., Fort Smith, Ark.

LANGWORTHY, HENRY G., Aural 1907
394 W. 10th, Dubuque, Iowa

LAPIERRE, WARREN W., Oph. 1948
32 Clinton Ave., Norwichtown, Conn.
10 Shetucket, Norwich, Conn.

LAVOIE, ROLAND, JR., Laryn. 1950
3 Claire Fontaine, Quebec City, Que., Canada

LAWLOR, ROBERT C. (a. Oph.), Oph. 1959
9 Central, Lowell, Mass.

LEAHEY, BRENDAN D. (s. Oph.), Oph. 1933
9 Central, Lowell, Mass.

LEAVELLE, ROBERT B., Oph. 1953
4747 Vineland Ave., N. Hollywood, Cal.

LECONTE, CHARLES M., Laryn. 1947
Rue Royale, Cap-Haitien, Haiti

LEMOINE, ALBERT N., JR., Oph. 1945
4620 J. C. Nichols Pkwy., Kansas City, Mo.

LENTINE, JOSEPH (s. Laryn.), Laryn. 1935
15 Bay State Rd., Boston, Mass.

L'ESPERANCE, FRANCIS A., JR. (r. Oph.)

LEVITT, JESSE M., Oph. 1933
515 Ocean Ave., Brooklyn, N. Y.

LEWIS, DONALD K. (assoc. s. Laryn., dir. Win-
throp Fd.), Laryn. 1943
243 Charles, Boston, Mass.
15 Dix, Winchester, Mass.

LIEBMAN, SUMNER D. (a. s. Oph.), Oph. 1943
115 Bay State Rd., Boston, Mass.
39 Elm, Southbridge, Mass.

LILLY, JOHN S., Laryn. 1951
215 E. Columbus, Kenton, Ohio

LINCOFF, WILLIAM, Oph. 1954
302 E. 9th, Chester, Pa.

LINEBACK, MERRILL I., Laryn. 1952
219 W. Georgia Ave., College Park, Ga.

LINGEMAN, BYRON S. (a. Oph.), Oph. 1960
328 Washington, Wellesley Hills, Mass.

LODGE, EDMUND A., Laryn. 1924
24 Pleasant, Gloucester, Mass.

LOFGREN, ROBERT H. (r. Laryn.)

LOTHROP, OLIVER A., Aural 1911
91 Neshobe Rd., Waban, Mass.

LOUgee, JOHN L., Aural 1909
195 St. Paul, Brookline, Mass.

LOVELY, DAVID K., Laryn. 1946
73 Deering, Portland, Me.

MASSACHUSETTS EYE AND EAR INFIRMARY

LOVESY, BURTON E., Laryn. 1935
15 W. Central, Natick, Mass.

LURIE, MOSES H. (sr. cons. s. Laryn.)
483 Beacon, Boston, Mass.

MACDONALD, ALEXANDER E., Oph. 1923
421 Medical Arts Bldg., Toronto, Ont., Canada

MACDONALD, DONALD H., Laryn. 1930
VA Hospital, Augusta, Ga.

MACHAMER, R. WENNER, Laryn. 1945
2060 E. Ninth, Cleveland, Ohio

MACKENZIE, ROLAND C., Oph. 1911
30 Grant, Waltham, Mass.

MACLAUGHLIN, CHARLES H. (a. s. Oph.),
Oph. 1947
834 Broadway, Everett, Mass.

MACMILLAN, ALEXANDER S., JR. (a. roent.)
483 Beacon, Boston, Mass.

MACMILLAN, ALEXANDER S., SR. (roent.)
483 Beacon, Boston, Mass.

MACNIE, JOHN P., Oph. 1929
635 W. 165th, N. Y. C.

MALKOFF, JACK, Laryn. 1955
1105 Belmont Ave., Youngstown, Ohio

MANCALL, IRWIN T. (a. Oph.), Oph. 1952
750 Main, Hartford, Conn.

MANGIARACINE, ANITA (bact.)
243 Charles, Boston, Mass.

MARFEY, S. PETER (biochem.)

MARTIN, S. FORREST (a. s. Oph.), Oph. 1938
165 Bay State Rd., Boston, Mass.

MARTINEZ, DANIEL E. M., Laryn. 1953
Veterans Hosp., Dallas, Tex.

MATTIS, ROBERT DEAN, Oph. 1942
634 N. Grand Blvd., St. Louis, Mo.

McCABE, FRANK J., Oph. 1916
204 Angell, Providence, R. I.

McCALL, ROBERT E., Laryn. 1938
236 S. Main, Marion, N. C.

McCLINTOCK, WALTER L., Laryn. 1938

MCENEANEY, JOSEPH P., Laryn. 1947
301 Essex, Lawrence, Mass.

McGUIGAN, G. EDMUND, Oph. 1924
26 W. King, York, Pa.

McINTIRE, FREDERIC J., Oph. 1910
63 N. Common, Lynn, Mass.

McKEIGUE, JOHN E. (assoc. s. Laryn.),
Laryn. 1949
274 Commonwealth Ave., Boston, Mass.
94 Pleasant Ave., Arlington, Mass.

McKENZIE, RODNEY J., Laryn. 1942
480 Doctors' Bldg., 19 Garfield Pl.,
Cincinnati, Ohio

MCLEOD, ANGUS M., Laryn. 1942
Medical Arts Bldg., Toronto, Ont., Canada

MCLEOD, JOHN, Oph. 1930
209 Tower Bldg., 116 W. 47th, Kansas City, Mo.

MEEK, RAYMOND E., Oph. 1926
"The North House," Stephentown, N. Y.

MELTZER, PHILIP E. (acting c. Laryn. & s.
Winthrop Fd.), Aural 1919
243 Charles, Boston, Mass.
285 Commonwealth Ave., Boston, Mass.

MERTINS, PAUL S., Laryn. 1936
46 Clayton, Montgomery, Ala.

MESSENGER, HARRY K., Oph. 1934
140 Marlborough, Boston, Mass.

MEYER, MONTO F., Oph. 1919
904 Canal Bank Bldg., New Orleans, La.

MILAM, DANIEL F., Oph. 1955

MILES, NATHAN E., Oph. 1937
1031 S. 21st, Birmingham, Ala.

MILLER, DANIEL (assoc. s. Tumor Clinic),
Laryn. 1943
60 Charlesgate West, Boston, Mass.

MILLS, LLOYD, JR., Oph. 1947
1136 West Sixth, Los Angeles, Cal.

MONTGOMERY, WILLIAM W. (a. s. Laryn.
& a. to c. Laryn.) Laryn. 1955
243 Charles, Boston, Mass.

MOORE, DONALD E., Oph. 1937
713 E. Genessee, Syracuse, N. Y.

MOORE, EDWARD E., Oph. 1944
200 Battery Park Ave., Asheville, N. C.

MOORE, JAMES A., Laryn. 1940
525 E. 68th, N. Y. C.

MOORMAN, JOHN D., Oph. 1939
221 E. Holmes, Huntsville, Ala.

MORGAN, ANNE S. (a. r. Oph. path.)

MORRISSEY, ARTHUR M. (a. s. Oph.)
24 Rural Ave., Medford, Mass.

MOSHER, HENRY A. (a. s. Oph.), Oph. 1941
266 Beacon, Boston, Mass.

MOTELEY, FREDERICK E., Laryn. 1925
Charlotte Eye & Ear Hospital, Charlotte, N. C.

ONE HUNDRED AND THIRTY-THIRD ANNUAL REPORT

MOULTON, EVERETT C., JR., Oph. 1948
1214 N. B., Fort Smith, Ark.

MOURKIDOU, SOTIRIA (fel. Anes.)

MUELLER, WERNER (dir. Laryn. path. & Mosher
Lab.), Laryn. 1933
243 Charles, Boston, Mass.

MURPHY, WILLIAM E., Laryn. 1933
390 Main, Worcester, Mass.

MYERS, ROSCOE W., Oph. 1927
36 Pleasant, Worcester, Mass.

MYERS, STANLEY A., Laryn. 1937
3119 Market, Youngstown, Ohio

MYSEL, PHILIP (sr. cons. s. Laryn.)
79 Bay State Rd., Boston, Mass.

NACHLAS, N. EDWARD, Laryn. 1951
2 E. Read, Baltimore, Md.

NAVAS, LUIS, Laryn. 1950
Apartado N. 376, Managua, Nicaragua, C. A.

NEAME, JOHN H. (fel. Laryn.)

NICHOLSON, HARRY M., Aural 1913
1 Young, Hamilton, Ont., Canada

NOVAK, HERBERT (biochem.)

O'BRIEN, DONALD F. (elect. eng. Otol.)

O'CONNELL, JOHN D., Oph. 1943
50 Farmington Ave., Hartford, Conn.

O'CONNOR, MICHAEL JOHN, Aural & Lar. 1923
105 Waterman, Providence, R. I.

OFFENBACH, BERTHA (a. Oph.)
51 Homer, Newton Centre, Mass.

OGDEN, FREDERIC W., Laryn. 1942
19 E. Center, Fayetteville, Ark.

OKAMURA, ICHIRO D. (a. s. Oph.), Oph. 1952
99 W. Cedar, Boston, Mass.

OLDS, BOMAR A., Laryn. 1929
124 W. Princeton Ave., College Park, Ga.

OLIVE, GEORGE M., JR., (a. Oph.), Oph. 1959
270 Commonwealth Ave., Boston, Mass.
94 Pleasant, Arlington, Mass.

OLIVER, PETER (r. Laryn.)

PAPPAS, STEPHEN S. (fel. Oph.)

PARKER, HARRY C., Oph. 1902
831 Garfield, Hobart, Ind.

PATTERSON, WILLIAM J., Laryn. 1956
1541 W. Broadway, Vancouver 9, B. C.

PAVLO, IRVING L. (a. Oph.)
330 Dartmouth, Boston, Mass.
50 Shepard, Cambridge, Mass.

PERONE, PIERO, Laryn. 1955

PERRETTEN, FRANK A., Oph. 1957
208 Reynolds Bldg., Winston-Salem, N. C.

PFISTER, RAYMOND L., Laryn. 1952
1298 Herschel Ave., Cincinnati, Ohio

PIERCE, DAVID L. (r. Laryn.)

PIPPITT, RICHARD B. (a. s. Oph.), Oph. 1949
328 Washington, Wellesley Hills, Mass.

POLLEN, ABRAHAM (a. s. Oph.), Oph. 1944
636 Beacon, Boston, Mass.

POLLOCK, FREDERIC J., Laryn. 1935
104 S. Michigan Ave., Chicago, Ill.

POPPEN, MAYO J., Oph. 1948
14426 Van Nuys Blvd., Van Nuys, Cal.

POSNER, MARVIN, Oph. 1952
1101 Madison Ave., Albany 8, N. Y.

PRICE, R. RAYMOND, Oph. 1936
118 Rutledge Ave., Charleston, S. C.

PROVOST, ADOLPHE J., Laryn. 1927
1458 Elm, Manchester, N. H.

PRUDHON, CHARLES A., Laryn. 1927
168 Sterling, Watertown, N. Y.

QUEVEDO, A. ARTURO, Oph. 1933
4a Ave., Sur 19, Guatemala City, Guatemala, C. A.

QUEVEDO, JULIO, Laryn. 1941
15 Calle 6 - 59, Guatemala City, Guatemala, C. A.

RAGAN, JOHN D., Oph. 1954
736 Granville, Vancouver 2, B. C.

RAMBO, J. H. TOM, Laryn. 1948
535 Park Ave., N. Y. C.

RAYNES, ALPHONSE F., Oph. 1923
209 Miller Ave., Portsmouth, N. H.

REAGAN, DANIEL J., Oph. 1943, Laryn. 1944
507 Main, Worcester, Mass.

REED, GEORGE F. (assoc. s. Laryn. & a. to c.
Laryn.), Laryn. 1952
243 Charles, Boston, Mass.

REGAN, CHARLES D. J. (a. Oph.), Oph. 1953
99 W. Cedar, Boston, Mass.

RICE, EARLE W., Laryn. 1953
390 Main, Worcester, Mass.

RICE, THEODORE A., Oph. 1942
2021 N. Central, Phoenix, Ariz.

RICHARD, LEON J. (fel. Oph.)

RICHARDS, LYMAN G. (sr. cons. s. Laryn.),
Laryn. 1924
Medical Dept., M.I.T., Cambridge, Mass.

RICHARDSON, JOHN R. (s. Laryn., s. Bron. &
Esoph.), Laryn. 1935
403 Commonwealth Ave., Boston, Mass.

RICHLIN, JAY J. (r. Oph.)

MASSACHUSETTS EYE AND EAR INFIRMARY

RIEMER, KARL (a. s. Oph.), Oph. 1943
403 Commonwealth Ave., Boston, Mass.

RIFE, CHARLES J., Oph. 1958
716 N. Lime, Lancaster, Pa.

RING, HENRY G. (a. Oph.), Oph. 1958
111 Maple, Springfield, Mass.

ROBINSON, MENDELL, Laryn. 1957
206 Waterman, Providence, R. I.

ROGERS, WILLIAM P., JR. (a. s. Laryn.)
275 Charles, Boston, Mass.
101 River Rd., Weston, Mass.

ROOPENIAN, ARAM (assoc. s.), Laryn. 1944
475 Commonwealth Ave., Boston, Mass.

ROSENBLITH, WALTER A. (res. assoc. Otol.)
M.I.T., Cambridge, Mass.

ROTHWELL, STEPHEN C., Laryn. 1925
S. Dartmouth, Mass.

RUBEN, MAURICE (a. s. Laryn.)
151 Maple, Springfield, Mass.

RUGGLES, RALPH H. (sr. cons. s. Oph.), Oph. 1920
135 County on Rt. 109, Medfield, Mass.

RUNGE, PAUL M., (a. Oph.)
140 Marlborough, Boston, Mass.
47 W. Elm, Brockton, Mass.

RUTNIN, UTHAI (fel. Oph.)

SABATES, FELIX N. (fel. Oph.)

SACHS, BARUCH J. (a. Oph.), Oph. 1957
636 Beacon, Boston, Mass.

SACHS, BENJAMIN (sr. cons. s. Oph.), Oph. 1925
636 Beacon, Boston, Mass.

SADE, JACOB, Laryn. 1958
47 Rothchild Blvd., Tel Aviv, Israel

SAEED, YUNIS M., Laryn. 1954
1634 S. Grant, San Mateo, Cal.

SAINSBURY, AUGUSTUS W., Laryn. 1943
134 N. Main, Canandaigua, N. Y.

SAMS, JAMES M., Laryn. 1949
200 W. Market, Johnson City, Tenn.

SARGENT, FRANCIS B., Aural & Lar., 1923
124 Waterman, Providence, R. I.

SAVAGE, ROSS E., Oph. 1910
201 Main, Gloucester, Mass.

SCARNEY, HERMAN D., Oph. 1928
3011 W. Grand Blvd., Detroit, Mich.

SCHALL, LEROY A. (sr. cons. s. Laryn.)
66 Beacon, Boston, Mass.

SCHEPENS, CHARLES L. (a. s. Oph., dir. Ret.
Serv. & dir. Ret. Fd.)
99 W. Cedar, Boston, Mass.

SCHNEBLY, J. THOMAS, Oph. 1936
11134 Georgia Ave., Silver Spring, Md.

SCOTT, ALFRED W. (a. Oph.), Oph. 1955
7 Bay State Rd., Boston, Mass.

SCOTT, DAVID H. (a. s. Oph.), Oph. 1949
7 Thorndike, Beverly, Mass.

SEALE, EARL S. (assoc. s. Oph.), Oph. 1940
126 Bay State Rd., Boston, Mass.

SEBESTYEN, JOHN G. (fel. Oph.)

SHAMBAUGH, GEORGE E., JR., Laryn. 1932
55 E. Washington, Chicago, Ill.

SHEA, JOHN J., Laryn. 1953
1018 Madison Ave., Memphis, Tenn.

SHEEHAN, LINUS A., Oph. 1943
210 Angell, Providence, R. I.

SHERMAN, MORRIS, Laryn. 1950
82 W. Commerce, Bridgeton, N. J.

SHORE, SIDNEY (a. Laryn.)
60 Charlesgate W., Boston 15, Mass.

SILVA-F, JORGE (fel. Oph.)

SIMMONS, RICHARD J. (r. Oph.)

SKILLING, FRANCIS C., Oph. 1933
25 S. E. 2nd Ave., Miami, Fla.

SLAUGHTER, EARL C., Laryn. 1940
1265 Fifth, Norfolk, Neb.

SLOANE, ALBERT E. (assoc. s. Oph. & dir.
Refraction & Limited Vision Clinic)
416 Marlborough, Boston, Mass.

SMITH, HAROLD, Laryn. 1937
1149 N. Garvey Ave., Pomona, Cal.

SMITH, TAYLOR R. (a. s. Oph. & dir. Oph.
path.), Oph. 1951
243 Charles, Boston, Mass.

SMITH, WILLIAM L., Oph. 1950
U. S. Naval Hosp., Philadelphia, Pa.

SNOW, JAMES B., JR. (r. Laryn.)

SNOW, JOHN C. (c. Anes.)
243 Charles, Boston, Mass.

SNOW, ROBERT G., Laryn. 1940
508 E. S. Temple, Salt Lake City, Utah

SPINOLA, EDMUND T. L., Laryn. 1954
Rua Da Graca 19, Bahia, Brazil, S. A.

SPRATT, CHARLES N., Oph. 1904
5725 N. 11th, Phoenix, Ariz.

STAPFF, VOLKER H., Laryn. 1952
Agraciada 1640, Montevideo, Uruguay, S. A.

STEMMER, AUGUST L., Laryn. 1959
2059 Smith Rd., Hamilton, Ohio

STEPHENS, H. FREDERICK, Oph. 1939
195 Thayer, Providence, R. I.

ONE HUNDRED AND THIRTY-THIRD ANNUAL REPORT

STERNSTEIN, HERMAN J. (assoc. s. Laryn.)
54 Winter, Norwood, Mass.

STONE, WILLIAM, JR. (a. s. Oph., dir. Oph.
Plastics lab), Oph. 1949
243 Charles, Boston, Mass.
1101 Beacon, Brookline, Mass.

STONECYPER, DAVID, JR., Oph. 1959
1320 Fourth Ave., Nebraska City, Neb.

SUDARSKY, RAYMOND DAVID, Oph. 1956
11 E. 68th, N. Y. C.

SULLIVAN, GARRETT L. (assoc. s. Oph.),
Oph. 1938
275 Charles, Boston, Mass.

SWARTZ, MORRIS (a. Laryn.)
18 Broad, Lynn, Mass.

SWEEBE, EDWARD C. (a. Oph.), Oph. 1959
243 Charles, Boston, Mass.

TAYLOR, IRVIN S., Oph. 1958
62 S. Highland Ave., Ossining, N. Y.

TEGELBERG, JULIUS, Laryn. 1931
121 Lincoln, Worcester, Mass.

THOMAS, JOHN H., Laryn. 1944, Oph. 1946
1621 E. Market, Warren, Ohio

THORLAKSON, NEIL F., Oph. 1956
916 Cobb Bldg., Seattle, Wash.

TOOT, J. FREDERICK, Oph. 1922
120 Tuscarawas, W. Canton, Ohio

TRAKAS, JOHN C. (a. Laryn.)
1269 Beacon, Boston, Mass.

TROTTER, ROBERT R. (a. s. Oph., a. to c. Oph.
& dir. Glaucoma Cons. Serv.), Oph. 1951
243 Charles, Boston, Mass.

TUCKER, DONALD P., Oph. 1959
3210 State, Erie, Penn.

TWITCHELL, MARSHALL C., Oph. 1941
217 S. Union, Burlington, Vt.

VAIL, DERRICK T., Oph. 1924
700 N. Michigan Ave., Chicago, Ill.

VERHOEFF, FREDERICK H. (cons. c. Oph.)
61 Monmouth, Brookline, Mass.

VIGER, ROLAND J., Oph. 1937
Medical Bldg., 1414 Drummond, Montreal,
Que., Canada

VON PIRQUET, SILVIO (fel. Oph.)

WALKER, D. HAROLD (sr. cons. s. Laryn.), Aural
1902
Peterborough, N. H.

WALTER, JOHN B. (fel. Laryn.)

WATTLES, F. MERRILL, Laryn. 1938
1200 Kuhl Ave., Orlando, Fla.

WEBSTER, FRANKLIN R., Oph. 1926
109 S. Warren, Syracuse, N. Y.

WEILLE, FRANCIS L. (s. Winthrop Fd.), Laryn.
1929
247 Commonwealth Ave., Boston, Mass.

WEISER, ALBERT (a. Laryn.)
390 Pine, Fall River, Mass.

WEISMAN, HERMAN J., Laryn. 1944
509 W. Willow, Visalia, Cal.

WEST, FRANCIS J. (a. s. Oph.), Oph. 1947
195 Ashmont, Dorchester, Mass.

WHITE, LEON E. (sr. cons. s. Laryn.), Aural &
Lar. 1923
164 Cordaville Rd., Ashland, Mass.

WHITNEY, JEREMY B. (r. Oph.)

WHITNEY, RAYMOND C., Oph. 1922
227 Union, New Bedford, Mass.

WIEDMAN, MICHAEL (a. Oph.)
9 Central, Lowell, Mass.

WILKER, SIDNEY R. (a. Laryn.)
285 Commonwealth Ave., Boston, Mass.

WILKINS, SAMUEL H. (sr. cons. s. Oph.)
270 Commonwealth Ave., Boston, Mass.

WILLIAMS, ALBERT (a. Laryn.)
54 Prichard, Fitchburg, Mass.

WILLIS, HARRY C., Aural & Lar. 1923
216 E. Nash, Wilson, N. C.

WINKLER, HERMAN A., Laryn. 1926
224 Thayer, Providence, R. I.

WISHART, DAVID E. S., Aural & Lar. 1922
170 St. George, Toronto, Ont., Canada

WOODWARD, ARTHUR S., Laryn. 1958
Woodland Clinic Medical Group, Woodland, Cal.

WOODWARD, M. WAYNE, Oph. 1950
20 Battery Park Ave., Asheville, N. C.

WRIGHT, CLARENCE F., Laryn. 1931
Weston, Ont., Canada

WRIGHT, EDWARD N., Laryn. 1933
106 Med. Arts Bldg., Port Arthur, Ont., Canada

ZACHARIAS, LEONA (biol.)
243 Charles, Boston, Mass.

ZANEK, OTTO L., Oph. 1946
802 Travis, Houston, Tex.

ZAVALIA, JULIO U., Laryn. 1958
Av. Hipolito Irigoyen 386, Cordoba, Argentina

ZEAVIN, BERNARD, Oph. 1954
312 S. Washington, Alexandria, Va.

ZIV, BENJAMIN (fel. Oph.)

ZONDERMAN, BERNARD (assoc. s. Laryn. &
assoc. s. Winthrop Fd.), Laryn. 1946
285 Commonwealth Ave., Boston, Mass.

ZOVICKIAN, ANTHONY (a. s. Laryn.)
274 Commonwealth Ave., Boston, Mass.

In Memoriam

GEORGE H. POIRIER, M.D.

Senior Consulting Surgeon in Otolaryngology

July 28, 1886 — August 8, 1959

1915 — Clinical Assistant in Otolaryngology

1922 — Assistant Surgeon in Otolaryngology

1925 — Associate Surgeon in Otolaryngology

1933 — Surgeon in Otolaryngology

1935 — Secretary to Board of Surgeons in Otolaryngology

1946 — Senior Consulting Surgeon in Otolaryngology

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243 CHARLES ST., BOSTON, MASS.

Massachusetts
Eye and Ear Infirmary

ONE HUNDRED and THIRTY-FOURTH
ANNUAL REPORT

Reports for 1960

Staff and Officers for 1961



243 CHARLES STREET
BOSTON 14, MASSACHUSETTS

Massachusetts Eye and Ear Infirmary

ONE HUNDRED and THIRTY-FOURTH
ANNUAL REPORT

Reports for 1960

Staff and Officers for 1961



243 CHARLES STREET
Telephone: LAFAYETTE 3-7900

BOSTON 14, MASSACHUSETTS

MASSACHUSETTS EYE AND EAR INFIRMARY

INCORPORATED IN 1827

THE MASSACHUSETTS EYE AND EAR INFIRMARY and its Clinics serve men, women, and children from all over New England and beyond who need expert care for diseases and injuries of the eye, ear, nose, and throat. Established in 1824, the Infirmary is one of the two oldest hospitals in the country specializing in the preservation of good eyesight and sound hearing.

The Infirmary is a voluntary hospital—an independent, non-profit, private institution. The Board of Managers is non-paid and the Staff of specialists gives its services without charge to patients in the clinics and to those patients who come into the hospital "on service." The hospital receives no support from city or state but is financed by receipts from patients, by voluntary gifts and bequests, and by our allotment from the United Community Services as a "Red Feather Service." However, the Infirmary's allotment from the United Community Services is not sufficient to cover the amount the hospital gives in "free service" to patients from the Greater Boston area who cannot pay for their own care.

In many ways the Infirmary and the Massachusetts General Hospital, its neighbor, cooperate to give complete medical service to patients. The Clinics of both hospitals share a common Admitting Office with its entrance on Fruit Street. Also, for maximum efficiency and economy, the two hospitals unite in such services as pharmacy, patients' records, personnel.

The Clinics and service beds at the Infirmary are open to those who are not able to pay doctors' fees, since the Staff gives its services without charge to such patients. All patients in the Clinics and in the hospital are under the medical and surgical care of doctors on the hospital staff who are specialists in Ophthalmology and Otolaryngology.

Whenever the patient is already under the care of a doctor, arrangements for his admission to the

Infirmary should be made by his own doctor, or the patient should bring a letter from his doctor recommending admission to the hospital. However, any patient who is not under a doctor's care and who is not able to pay for private care, is eligible for treatment in the Clinics and service accommodations. In cases of emergency, of course, a patient is admitted immediately at any time of the day or night.

The Clinics located on Fruit Street are open daily except Sunday and legal holidays* for a fee of \$3.50† per clinic visit. After a preliminary interview, patients are examined by the clinic doctor and treatment is prescribed. If further treatment is necessary, the clinic patient is given an appointment for his next visit, as all but the first visit are by appointment only.

Patients are admitted to the service accommodations by direct appointment with the Admitting Office, 243 Charles Street, from 9 to 10 A.M. daily except Sunday and legal holidays. Arrangement for admission to private accommodations is made by the Staff doctor in charge of the patient, who then comes on the appointed day to the Infirmary Admitting Office.

Daily rates† for board and room for service patients are \$25. For private patients, five and six bed rooms are \$27 and two bed rooms are \$30 and \$32, single room with lavatory, \$34 per day, and single room with bath \$40. In the Children's Wing, semi-private accommodations are \$28 per day. These rates include general nursing, ordinary medicine. Additional charges are made for operating room, x-ray, laboratory tests, special nursing.

Blue Cross (Associated Hospital Service) plans are accepted at the Infirmary, the benefits being allowed as soon as approval has been received. All other non-profit insurance is handled by the patient for himself, and he pays the regular rates to the hospital.

*Ear, Nose and Throat Clinic not open Saturdays in July and August.

†As of January 1, 1961.

ONE HUNDRED AND THIRTY-FOURTH ANNUAL REPORT

Board of Managers

1961

<i>President</i>	.	.	.	Henry Hixon Meyer, 53 State Street, Boston	.	.	.	.	1937
<i>Secretary</i>	.	.	.	Hon. Edmund V. Keville, 10 Pemberton Sq., Boston	.	.	.	1942-43, 1945	
<i>Treasurer</i>	.	.	.	Horace W. Frost, 74 State Street, Boston	.	.	.	.	1940
Melville Chapin	.	.	.	84 State Street, Boston	.	.	.	.	1956
William H. Claflin, III	.	.	.	74 State Street, Boston	.	.	.	.	1947
Mrs. Richard Cary Curtis	.	.	.	Manchester	.	.	.	.	1940
Mrs. John W. Farley	.	.	.	898 South Street, Needham	.	.	.	.	1957
Mrs. Foster Furcolo*	.	.	.	45 Tudor Road, Chestnut Hill	.	.	.	.	1959
Robert H. Hopkins	.	.	.	82 Devonshire Street, Boston	.	.	.	.	1951
William A. Parker	.	.	.	200 Berkeley Street, Boston	.	.	.	.	1935
Mrs. Sullivan A. Sargent	.	.	.	701 South Street, Needham	.	.	.	.	1945
LeRoy A. Schall, M.D.*	.	.	.	Scudder Lane, Barnstable	.	.	.	.	1959
Walter H. Trumbull	.	.	.	185 Meadow Brook Road, Weston	.	.	.	.	1929
Frederic Winthrop	.	.	.	Groton House, Ipswich	.	.	.	.	1943

*appointed by the Commonwealth

Corporation

(IN ADDITION TO MANAGERS)

Robert F. Bradford	.	.	.	.	.	.	53 State Street, Boston
Richard P. Chapman	.	.	.	.	.	.	28 State Street, Boston
William Ehrlich	.	.	.	.	.	.	1360 Commonwealth Avenue
Nathaniel Faxon, M.D.	.	.	.	.	.	.	West Falmouth
Richard Harte, Sr.	.	.	.	.	.	.	Ames Company, North Easton
Francis W. Hatch, Jr.	.	.	.	.	.	.	N. E. Mutual, 501 Boylston St., Boston
Thomas H. Hoare	.	.	.	.	.	.	6 Beacon Street, Boston
Weston Howland, Jr.	.	.	.	.	.	.	140 Federal Street, Boston
Mrs. Francis T. Hunter	.	.	.	.	.	.	56 Lawrence Road, Chestnut Hill
Mrs. Varaztad H. Kazanjian	.	.	.	.	.	.	191 Clifton Street, Belmont
William F. Keesler, Jr.	.	.	.	.	.	.	342 Beacon Street, Boston
Arthur T. Lyman	.	.	.	.	.	.	37 Thatcher Street, Westwood
George A. McLaughlin	.	.	.	.	.	.	11 Pemberton Square, Boston
Rev. Robert G. Metters	.	.	.	.	.	.	St. George's School, Route 5, Spokane, Wash.
August R. Meyer	.	.	.	.	.	.	53 State Street, Boston.
Miss Amelia Peabody	.	.	.	.	.	.	120 Commonwealth Avenue, Boston
George L. Pew	.	.	.	.	.	.	17 Storer Street, Portland, Maine
Henry K. Porter	.	.	.	.	.	.	74 Foley Street, Somerville
Huston Rawls	.	.	.	.	.	.	84 State Street, Boston
Hon. Leverett Saltonstall	.	.	.	.	.	.	82 Devonshire Street, Boston
William L. Saltonstall	.	.	.	.	.	.	82 Devonshire Street, Boston
Arthur L. Sherin	.	.	.	.	.	.	80 Federal Street, Boston
Leslie Soule	.	.	.	.	.	.	Strawberry Hill Street, Dover
Frederick H. Verhoeff, M.D.	.	.	.	.	.	.	252 Pleasant Street, Marblehead
D. Harold Walker, M.D.	.	.	.	.	.	.	"Tree Tops," Peterborough, N. H.
Howland S. Warren	.	.	.	.	.	.	1 Federal Street, Boston

MASSACHUSETTS EYE AND EAR INFIRMARY

Committees

EXECUTIVE COMMITTEE

Henry Hixon Meyer
Horace W. Frost
William H. Claflin, III
Robert H. Hopkins

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Henry Hixon Meyer
Horace W. Frost
William A. Parker

SALARY COMMITTEE

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Horace W. Frost
William H. Claflin, III
Francis S. Hill

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William H. Claflin, III
Francis S. Hill

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Walter H. Trumbull
Francis S. Hill
Charles T. Wood
Raymond W. Lyons

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Dr. Ludvig vonSallman
Prof. Francis O. Schmitt

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George Kelemen, M.D.
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S. Peter Marfey, M.D.
Philip E. Meltzer, M.D.
Walter A. Rosenblith, Ing. Rad.
Charles L. Schepens, M.D.
Adelbert Ames, II, M.D., Ex. Sec.
Herman J. Sternstein, M.D.
William Stone, Jr., M.D.
Francis L. Weille, M.D.
Charles T. Wood

Leona Zacharias, Ph.D.

LIBRARY COMMITTEE

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Harry K. Messenger, M.D.
Walter H. Trumbull

ONE HUNDRED AND THIRTY-FOURTH ANNUAL REPORT

SOCIAL SERVICE ADVISORY COMMITTEE

Henry K. Porter, *Chr.*
Mrs. Varaztad H. Kazanjian
Mrs. Edgar M. Holmes
Miss Ruth Farrisey, R.N.

Moses H. Lurie, M.D.
Karl Riemer, M.D.
John E. McKeigue, M.D.
Reverend Thomas J. Carroll

Weston Howland, Jr.

HOUSE COMMITTEE

Mrs. John W. Farley, *Chr.*
Melville Chapin
Abraham Pollen, M.D.
George F. Reed, M.D.

PUBLIC RELATIONS ADVISORY COMMITTEE

Francis W. Hatch, Jr., *Chr.*
Thomas H. Hoare

LADIES VISITING COMMITTEE

Chairman
Treasurer
Recording Secretary
Corresponding Secretary

Mrs. John R. Richardson
Mrs. Herbert W. Kelley
Mrs. Edgar H. Kent
Mrs. Robert L. Goodale

Mrs. David H. Bangs
Mrs. William A. Barron, Jr.
Mrs. Lucy B. Barry
Mrs. Maurice Berlin
Mrs. Arlie V. Bock
Mrs. Nehemiah Boynton, Jr.
Mrs. Harry E. Braconier
Mrs. Harry P. Cahill
Mrs. Paul A. Chandler
Mrs. Richard B. Chapman
Mrs. Julian F. Chisholm, Jr.
Mrs. Nathaniel D. Clapp
Mrs. Joseph M. Clough
Mrs. Robert W. Clubb
Mrs. David G. Cogan
Mrs. Colin McA. Cunningham
Mrs. Henry E. W. Cunningham
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Mrs. Livingston Davis
Mrs. Walter C. Dodge
Mrs. David D. Donaldson
Mrs. Weld Douglass
Mrs. Edwin B. Dunphy
Mrs. Mahlon T. Easton
Mrs. John Wells Farley
Mrs. Arthur F. Fay
Mrs. Henry H. Fay
Mrs. Allen R. Finlay
Mrs. Ephraim Friedman
Mrs. John Good

Mrs. W. Morton Grant
Mrs. Robert P. Gulick
Mrs. Trygve Gundersen
Mrs. Bartlett Harwood
Mrs. Julius N. Hicks
Mrs. Valentine Hollingsworth
Mrs. Edgar M. Holmes
Mrs. Francis T. Hunter
Mrs. Alfred L. Hurst
Mrs. Carl C. Johnson
Mrs. Varaztad H. Kazanjian
Mrs. Victor H. Kazanjian
Mrs. Vincent J. Kelley
Mrs. Edmund V. Keville
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Mrs. Joseph Lentine
Mrs. James H. Lowell, II
Mrs. Henry Lyman, Jr.
Mrs. Alexander S. Macmillan, Jr.
Mrs. William W. McCarthy
Mrs. Henry D. Minot
Mrs. G. Gardiner Monks
Mrs. William W. Montgomery
Mrs. Noel Morss
Mrs. Stephen P. Mugar
Mrs. George M. Olive, Jr.
Mrs. Peter Oliver
Mrs. Grafton B. Perkins
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Mrs. Henri Prunaret
Miss Mary A. Redman
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Mrs. George F. Reed

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Mrs. Nathan Rothenberg
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Mrs. Richard E. Savory
Mrs. Charles L. Schepens
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Mrs. Albert E. Sloane
Mrs. Reginald H. Smith
Mrs. James B. Snow, Jr.
Mrs. John C. Snow
Mrs. Leslie Soule
Mrs. Richard Southgate
Mrs. Channing S. Swan
Mrs. William L. Taggart, Jr.
Mrs. Thomas C. Thacher
Mrs. John E. Thayer, Jr.
Mrs. D. Stephen Thrall
Mrs. Robert Truesdale
Mrs. Eugene Vail
Mrs. Frederick H. Verhoeft
Mrs. George Vinsonhaler
Mrs. Lyon Weyburi
Mrs. Roy R. Wheeler
Mrs. John R. Whitney
Mrs. Harold B. Willis
Mrs. Andrew N. Winslow, Jr.
Mrs. Stewart C. Woodworth
Mrs. Anthony Zovickian

HONORARY MEMBERS

Mrs. Harold Peabody

Mrs. Harris P. Mosher

Department of Ophthalmology

Chief of Ophthalmology

Edwin B. Dunphy, M.D.

Surgeons in Ophthalmology

William P. Beetham, M.D.
Virgil G. Casten, M.D.
Trygve Gundersen, M.D.
David G. Cogan, M.D. (leave of absence)
Brendan D. Leahey, M.D.
Mahlon T. Easton, M.D.
Garrett L. Sullivan, M.D.

Consulting Chief of Ophthalmology

Frederick H. Verhoeff, M.D.

Associate Surgeons in Ophthalmology

Albert E. Sloane, M.D.
Thomas Cavanaugh, M.D.
Earl S. Seale, M.D.
Carl C. Johnson, M.D.
Henry F. Allen, M.D.
W. Morton Grant, M.D.
Sumner D. Liebman, M.D.
Abraham Pollen, M.D.
Charles L. Schepens, M.D.

Assistant Surgeons in Ophthalmology

Edward E. Covitz, M.D.
S. Forrest Martin, M.D.
Henry A. Mosher, M.D.
Harry E. Braconier, M.D.
Karl Riemer, M.D.
Charles H. MacLaughlin, M.D.
Francis J. West, M.D.
Joseph M. Clough, M.D.
Julian F. Chisholm, Jr., M.D.

Richard B. Pippitt, M.D.
David H. Scott, M.D.
Taylor R. Smith, M.D.
William Stone, Jr., M.D.
Frederic B. Breed, M.D.
Robert J. Brockhurst, M.D.
Warren D. Haley, M.D.
Thomas P. Cronin, M.D.

Edwin B. Goodall, M.D.
(leave of absence)
John M. Hill, M.D.
Arthur M. Morrissey, M.D.
Ichiro D. Okamura, M.D.
D. Robert Alpert, M.D.
Robert R. Trotter, M.D.
(leave of absence)

Assistants in Ophthalmology

Peter Beck, M.D.
(leave of absence)
S. Arthur Boruchoff, M.D.
Arthur F. Calnan, M.D.
Richard B. Chapman, M.D.
David D. Donaldson, M.D.
Joseph L. Dowling, Jr., M.D.
Carl Gates Freese, Jr., M.D.

Robert J. Herm, M.D.
Paul D. Hurley, M.D.
Carl Kupfer, M.D.
Robert C. Lawlor, M.D.
Byron S. Lingeman, M.D.
Irwin T. Mancall, M.D.
Bertha Offenbach, M.D.
George M. Olive, Jr., M.D.

Irving L. Pavlo, M.D.
Charles D. J. Regan, M.D.
Henry J. Ring, M.D.
Paul M. Runge, M.D.
Baruch J. Sachs, M.D.
Alfred W. Scott, M.D.
Edward C. Sweebe, M.D.
Michael Wiedman, M.D.

Residents in Ophthalmology

Howard E. Adkins, M.D.
John M. Carroll, M.D.
Eugene C. Ciccarelli, M.D.
Ephraim Friedman, M.D.

John R. Gehring, M.D.
Kevin Hill, M.D.
Ralph W. Hinckley, M.D.
Jed L. Howard, M.D.
Herbert E. Kaufman, M.D.

Jay J. Richlin, M.D.
Perry Rosenthal, M.D.
Richard J. Simmons, M.D.
Jeremy B. Whitney, M.D.

Fellows in Ophthalmology

Paulo Barros, M.D.
Joel Contreras, M.D.
James G. Dobbie, M.D.
Claes-Henrik Dohlman, M.D.
Dennis Harris, M.D.
David B. Karlin, M.D.
Anne Khu, M.D.

Eeva-Lisa M. Martola, M.D.
J. Wallace McMeel, M.D.
Saiichi Mishima, M.D.
Anne S. Morgan, M.D.
Stephen S. Pappas, M.D.
Calbert I. Phillips, M.D.
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Felix N. Sabates, M.D.
John G. Sebestyen, M.D.
Anwar Shah, M.D.
Denis B. Sweeney, M.D.
Daniel Toussaint, M.D.
Ernest G. Wolf, Ph.D.
Benjamin Ziv, M.D.

ONE HUNDRED AND THIRTY-FOURTH ANNUAL REPORT

Department of Otolaryngology

Chief of Otolaryngology
Philip E. Meltzer, M.D.

Surgeons in Otolaryngology

Vincent J. Kelley, M.D.	John R. Frazee, M.D.
Walter J. E. Carroll, M.D.	Joseph Lentine, M.D.
John R. Richardson, M.D.	J. Charles Drooker, M.D.

Surgeon for Bronchoscopy and Esophagoscopy
John R. Richardson, M.D.

Surgeon for Plastic Operations
Edgar M. Holmes, M.D.

Associate Surgeons in Otolaryngology

Herman J. Sternstein, M.D.	Charles Kent, M.D.
Donald K. Lewis, M.D.	Aram Roopenian, M.D.
John E. McKeigue, M.D.	George F. Reed, M.D.
Bernard Zonderman, M.D.	William W. Montgomery, M.D.

Associate Surgeon for Tumor Clinic
Daniel Miller, M.D.

Assistant Surgeons in Otolaryngology

Elizabeth DeBlois, M.D.	William P. Rogers, Jr., M.D.
Kenneth A. Kazanjian, M.D.	Hugo D. Angelini, M.D.
Anthony Zovickian, M.D.	Robert E. Klotz, M.D.

Assistants in Otolaryngology

Frank W. Brady, M.D.	Sydney Shore, M.D.
Louis E. Griffey, M.D.	Morris Swartz, M.D.
Lawrence S. Hirsch, M.D.	John C. Trakas, M.D.
Alfred L. Hurst, M.D.	Albert Weiser, M.D.
Mendell Robinson, M.D.	Sidney R. Wilker, M.D.

Albert H. Williams, M.D.

Residents in Otolaryngology

Lawrence R. Boies, Jr., M.D.	Robert H. Lofgren, M.D.
Werner D. Chasin, M.D.	Peter Oliver, M.D.
Shiro Fujita, M.D.	David L. Pierce, M.D.
Floyd B. Goffin, M.D.	Frederic W. Pullen, II, M.D.
Robert P. Gulick, M.D.	S. Harold Reuter, M.D.
William L. Hayden, M.D.	Edward F. Shaver, Jr., M.D.

Fellows in Otolaryngology

Geza Jako, M.D.	Takeshi Watanabe, M.D.
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Research Associates in Otology

Walter A. Rosenblith, Ing. Rad.
Himli Arslan, M.S.
Walter S. Burrage, M.D.

Research Assistant in Otology

✓ Nelson Y-s Kiang, Ph.D.

Electronics Engineers in Otology

Robert M. Brown, B.S.
Alan Crist, B.S.
Donald F. O'Brien, E.E.

Senior Consulting Surgeons

OPHTHALMOLOGY

Ralph H. Ruggles, M.D.
Merrill J. King, Sr., M.D.
Benjamin Sachs, M.D.
Paul A. Chandler, M.D.

D. Harold Walker, M.D.
Frederick L. Bogan, M.D.
Edwards W. Herman, M.D.
Gustave B. Fred, M.D.
Philip Mysel, M.D.
Lyman G. Richards, M.D.

Moses H. Lurie, M.D.
Robert L. Goodale, M.D.
Carl H. Ernlund, M.D.
Charles H. Allman, M.D.
Maurice G. Evans, M.D.
LeRoy A. Schall, M.D.

Consulting Pathologist
Parker Heath, M.D.

Plastic Operations
Varaztad H. Kazanjian, M.D.

Consulting Roentgenologist
✓ Alexander S. Macmillan, M.D.

Research Consultant
George Kelemen, M.D.

Director of Radiology
Alexander S. Macmillan, Jr., M.D.

Fellows in Anesthesiology
Raniero DiPiero, M.D. Dominic Lin, M.D.
Kamil Ergin, M.D. Sotiria Mourkidow, M.D.

Director of Anesthesiology
John C. Snow, M.D.

Director of Otolaryngological Pathology
✓ Werner Mueller, M.D.

Director of Ophthalmic Pathology
Taylor R. Smith, M.D.

Bacteriologist
✓ Anita Mangiaracine, A.B.

Associate Director of Ophthalmic Resident Teaching
Paul A. Chandler, M.D.

Biologists
Marie Jakus, Ph.D.
Leona Zacharias, Ph.D.

*Director of Pharmaceutical Research
and Manufacturing*
John T. Murphy, Phm.D.

Biochemists
Endre A. Balazs, M.D. ✓ Jin Kinoshita, Ph.D.
✓ Sidney Futterman, Ph.D. S. Peter Marfey, Ph.D.
Jacques Gosteli, Ph.D. Herbert Nowak, Ph.D.
Margarita Nowak, Ph.D.

Director of Pharmacy
John Webb

ONE HUNDRED AND THIRTY-FOURTH ANNUAL REPORT

Research

HOWE LABORATORY OF OPHTHALMOLOGY

David G. Cogan, M.D.

OPHTHALMIC PLASTICS LABORATORY

William Stone, Jr., M.D.

RETINA FOUNDATION

Charles L. Schepens, M.D.
Endre A. Balazs, M.D.

ELECTRORETINOGRAPHY LABORATORY

Benjamin Ziv, M.D.

RETROLENtal FIBROPLASIA LABORATORY

Julian F. Chisholm, Jr., M.D.
Leona Zacharias, Ph.D.

UVEITIS LABORATORY

Herbert E. Kaufman, M.D.

Ophthalmic Research Committee

Edwin B. Dunphy, M.D.
Trygve Gundersen, M.D.
Henry F. Allen, M.D.

EATON-PEABODY LABORATORY OF AUDITORY PHYSIOLOGY

Walter A. Rosenblith, Ing. Rad.
Nelson Y-s Kiang, Ph.D.

MICROCIRCULATORY LABORATORY

✓John W. Irwin, M.D.

D. HAROLD WALKER LABORATORY OF BIOCHEMISTRY

✓S. Peter Marfey, Ph.D.

TEMPORAL BONE LABORATORY

George Kelemen, M.D.

ATROPHIC RHINITIS LABORATORY

Herman Sternstein, M.D.

Coordinator of Otolaryngological Research

John W. Irwin, M.D.

Consulting Physicians

Myles P. Baker, M.D.
William H. Baker, M.D.
Victor G. Balboni, M.D.
Walter Bauer, M.D.
William S. Beck, M.D.
Kenneth T. Bird, M.D.
Edward E. Bland, M.D.
Evan Calkins, M.D.
John W. Cass, Jr., M.D.
Earle M. Chapman, M.D.
Richard J. Clark, M.D.
Perry J. Culver, M.D.
Briant L. Decker, M.D.
Daniel S. Ellis, M.D.
Dana L. Farnsworth, M.D.
John H. Fay, M.D.
Richard A. Field, M.D.

Anne P. Forbes, M.D.
Gerald S. Foster, M.D.
William Franklin, M.D.
Allan L. Friedlich, M.D.
Harriet L. Hardy, M.D.
Reed Harwood, M.D.
Frederick T. Hatch, M.D.
Benjamin L. Huntington, M.D.
Kurt J. Isselbacher, M.D.
Bernard M. Jacobson, M.D.
Rita M. Kelley, M.D.
Alfred Kranes, M.D.
Alexander Leaf, M.D.
Jacob Lerman, M.D.
Francis C. Lowell, M.D.
Farane Maloof, M.D.
Janet W. McArthur, M.D.
Gordon S. Myers, M.D.

Lot B. Page, M.D.
Arthur S. Pier, Jr., M.D.
Walter W. Point, M.D.
John T. Quinby, M.D.
Marian W. Ropes, M.D.
Charles L. Short, M.D.
Lloyd H. Smith, Jr., M.D.
John B. Stanbury, M.D.
John D. Stoeckle, M.D.
Joseph Stokes, III, M.D.
George P. Sturgis, M.D.
Morton N. Swartz, M.D.
Arthur L. Watkins, M.D.
Edwin O. Wheeler, M.D.
Richard G. Whiting, M.D.
Conger Williams, M.D.
Paul C. M. Zamecnik, M.D.

MASSACHUSETTS EYE AND EAR INFIRMARY

Consulting Dermatologists

John Adams, Jr., M.D.	Milton E. Helman, M.D.
Paul J. Catinella, M.D.	William R. Hill, Jr., M.D.
Thomas B. Fitzpatrick, M.D.	Mildred Ryan, M.D.
Earle A. Glicklich, M.D.	Robert F. Tilley, M.D.
Robert D. Griesemer, M.D.	Maurice M. Tolman, M.D.

Consulting Neurologists

John A. Abbot, M.D.	Charles M. Fisher, M.D.
Raymond D. Adams, M.D.	Vincent P. Perlo, M.D.
Mandel E. Cohen, M.D.	Edward P. Richardson, Jr., M.D.
Edwin M. Cole, M.D.	Robert S. Schwab, M.D.
Philip R. Dodge, M.D.	William Timberlake, M.D.
Pierre M. Dreyfus, M.D.	Maurice Victor, M.D.
	Henry deF. Webster, M.D.

Consulting Psychiatrists

Herbert Barry, Jr., M.D.	Thomas P. Hackett, M.D.	John C. Nemiah, M.D.
Clemens E. Benda, M.D.	Volta R. Hall, M.D.	Gardner C. Quarton, M.D.
Gerald Caplan, M.D.	Richmond Holder, M.D.	Peter E. Sifneos, M.D.
Franklin Carter, M.D.	Paul M. Howard, M.D.	Alfred H. Stanton, M.D.
Morris E. Chafetz, M.D.	Samuel Kaplan, M.D.	Jerome L. Weinberger, M.D.
Daniel C. Dawes, M.D.	John H. Lamont, M.D.	Avery D. Weisman, M.D.
Frank R. Ervin, M.D.	Erich Lindemann, M.D.	Vernon P. Williams, M.D.
Benjamin F. Gill, M.D.	Maria Lorenz, M.D.	Elizabeth R. Zetzel, M.D.
	Walter Mann, M.D.	

Consulting Pediatricians

T. Berry Brazelton, M.D.	Richard B. Kearsley, M.D.	Ralph A. Ross, M.D.
Leo B. Burgin, M.D.	Joseph J. McGovern, M.D.	Robert T. Sceery, M.D.
James J. A. Cavanaugh, M.D.	Alexander S. Nadas, M.D.	Mary Louise Scholl, M.D.
John D. Crawford, M.D.	Thomas C. Peebles, M.D.	Marion L. Slemmons, M.D.
William A. Dickson, M.D.	Murray E. Pendleton, M.D.	Nathan B. Talbot, M.D.
Philip R. Dodge, M.D.	William Pfeffer, Jr., M.D.	Wilhelmina VanDyke, M.D.
LeRoy L. Eldredge, Jr., M.D.	Charles V. Pyles, M.D.	Richard H. Watson, M.D.
Lawrence J. Essember, M.D.	Getrud C. Reyersbach, M.D.	Louis Weinstein, M.D.
Robert N. Ganz, M.D.	Robert H. Richie, Jr., M.D.	Thomas J. Whitfield, III, M.D.
Robert J. Haggerty, M.D.	John S. Robey, M.D.	Eleonore C. Zaudy, M.D.

ONE HUNDRED AND THIRTY-FOURTH ANNUAL REPORT

Consulting Surgeons

Benjamin A. Barnes, M.D.
Marshall K. Bartlett, M.D.
Glenn E. Behringer, M.D.
Bradford Cannon, M.D.
Edward D. Churchill, M.D.
Oliver Cope, M.D.
Gordon A. Donaldson, M.D.
F. Thomas Gephart, M.D.
Thomas H. Green, Jr., M.D.
Hermes C. Grillo, M.D.

Edward Hamlin, Jr., M.D.
Francis M. Ingersoll, M.D.
Roy E. Mabrey, M.D.
William V. McDermott, Jr., M.D.
John B. McKittrick, M.D.
George L. Nardi, M.D.
William C. Quinby, Jr., M.D.
John W. Raker, M.D.
George S. Richardson, M.D.

Grant V. Rodkey, M.D.
William P. Rogers, Jr., M.D.
J. Gordon Scannell, M.D.
Robert S. Shaw, M.D.
Richard H. Sweet, M.D.
Howard Ulfelder, M.D.
William R. Waddell, M.D.
Claude E. Welch, M.D.
Frank C. Wheelock, Jr., M.D.
Earle W. Wilkins, Jr., M.D.

Consulting Neurosurgeons

H. Thomas Ballentine, Jr., M.D.

William H. Sweet, M.D.

James C. White, M.D.

Consulting Orthopedists

Otto E. Aufranc, M.D.
Joseph S. Barr, M.D.
Thornton Brown, M.D.
William N. Jones, M.D.

Robert J. Joplin, M.D.
Paul L. Norton, M.D.
Eugene E. Record, M.D.
John A. Reidy, M.D.

Carter R. Rowe, M.D.

Consultant in Pharmacology

Otto Krayer, M.D.

Consultants in Preventive Medicine

John E. Gordon, M.D.
David D. Rutstein, M.D.

Consulting Urologists

Sylvester B. Kelley, M.D.
Walter S. Kerr, M.D.

Wyland F. Leadbetter, M.D.
Howard I. Suby, M.D.

Lorande M. Woodruff, M.D.

Consulting Endoscopist

Edward B. Benedict, M.D.

Consulting Pathologists

Benjamin Castleman, M.D.
Richard B. Cohen, M.D.
Winfield S. Morgan, M.D.
Robert E. Scully, M.D.

Donald C. Sniffen, M.D.
David Spiro, M.D., Ph.D.
Edgar B. Taft, M.D.
Austin L. Vickery, Jr., M.D.

Consulting Radiologists

Laurence L. Robbins, M.D.
Milford D. Schulz, M.D.
Stanley M. Wyman, M.D.

C. C. Wang, M.D.
Jack R. Dreyfuss, M.D.
Paul M. St. Subin, M.D.

Consulting Bacteriologists

Louis Dienes, M.D.
Lawrence J. Kunz, Ph.D.

MASSACHUSETTS EYE AND EAR INFIRMARY

Treasurer's Report

BALANCE SHEET

October 2, 1960

ASSETS

Cash in Bank and on Hand	\$ 667,514.39
Investments—Book Value:	
Securities	\$4,693,370.09
Interest in parcel of real estate	1.00
Interest in unsettled estate	1.00
Sealed envelopes	2.00
	<u>4,693,374.09</u>
Accounts Receivable:	
Patients—less reserve for doubtful accounts	\$ 224,887.87
Miscellaneous	4,949.60
	<u>229,837.47</u>
Inventories of Supplies, etc.	41,079.49
Plant:	
Land and buildings	\$3,006,572.67
Furniture, fixtures and equipment	304,070.88
	<u>\$3,310,643.55</u>
Less: Reserve for depreciation	871,576.51
	<u>2,439,067.04</u>
Construction in Progress	331,000.32
TOTAL	\$8,401,872.80

LIABILITIES AND FUNDS

Advances from Patients	\$ 4,671.04
Accounts Payable and Accruals	80,865.35
Special Funds	27,837.21
General Fund	1,333,827.04
General Pension Reserve	334,672.83
Permanent Funds—Income Restricted	1,224,490.24
Permanent Funds—Income Unrestricted	2,583,730.30
Special Purpose Funds	299,607.80
Unexpended Restricted Income of Permanent Funds	73,103.95
Funds Invested in Plant	<u>2,439,067.04</u>
TOTAL	\$8,401,872.80

ONE HUNDRED AND THIRTY-FOURTH ANNUAL REPORT

INCOME ACCOUNT

for the period ended October 2, 1960 (53 weeks)

Hospital Income as per Director's Report	\$2,567,668.48
Hospital Expenses as per Director's Report (including provision for depreciation—\$78,466.23)—See Note.....	2,734,909.14
Excess of Hospital Expenses Over Hospital Income	\$ 167,240.66
Income from Investment Securities, less Income Applicable to Restricted Funds and to General Pension Reserve	\$207,846.98
Receipts from United Community Services, Committee of the Permanent Charity Fund, Inc., Estates of Elisha V. Ashton, G. Gorham Peters and Others	52,717.76
	\$260,564.74
Less: Treasurer's Disbursements	17,298.85
	243,265.89
SURPLUS FOR THE PERIOD	\$ 76,025.23

NOTE: During the period, hospital operating expenses aggregating \$95,326.02 were charged directly against principal and income of Permanent Funds as follows:

Principal	\$73,961.00
Income	21,365.02
Total	<u>\$95,326.02</u>

AUDITORS' CERTIFICATE

Massachusetts Eye and Ear Infirmary
Boston
Massachusetts

We have examined the balance sheet of MASSACHUSETTS EYE AND EAR INFIRMARY as at October 2, 1960 and the related income account for the period ended at that date (53 weeks).

Our examination was made in accordance with generally accepted auditing standards and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

As a result of changes in requirements of the Massachusetts Division of Hospital Costs and Finances pertaining to depreciation as an element of reimbursable cost under third party contracts, the Infirmary's plant accounts and related allowances for depreciation have been adjusted as of September 28, 1959 to reflect actual costs of plant assets acquired and accumulated depreciation thereon based on useful lives of such assets. The adjust-

ment resulted in a net increase in funds invested in plant as of September 28, 1959 in the amount of \$120,797.40. Depreciation for the period ended October 2, 1960 is accordingly based on such restated plant costs and results in a provision approximately \$72,400 less than an amount computed on the previously adopted basis of a percentage of patient care expenses.

In our opinion, the accompanying balance sheet and related income account present fairly the financial position of Massachusetts Eye and Ear Infirmary at October 2, 1960 and the results of its operations for the period ended at that date, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding period, except for the change in depreciation policy described above, which we approve.

Boston, Massachusetts
December 9, 1960

PATTERSON, TEELE & DENNIS

MASSACHUSETTS EYE AND EAR INFIRMARY

SUMMARY OF INVESTMENTS

(As of October 3, 1960)

GENERAL FUND	Book Value*	Market Value	% of Market Value
BONDS:			
U. S. Government	\$ 1,516,369	\$ 1,526,346	20.2
Canadian Government	53,000	50,950	.7
Railroad	152,299	120,300	1.6
Public Utility	321,247	306,890	4.1
Industrial	283,405	270,880	3.6
Financial	15,860	14,880	.2
Miscellaneous	1,900	not valued	—
TOTAL BONDS	\$ 2,344,080	\$ 2,290,246	30.4
TOTAL PREFERRED STOCKS	\$ 141,929	\$ 167,650	2.2
COMMON STOCKS:			
Railroad	\$ 116,048	\$ 218,710	2.9
Public Utility	417,203	1,080,894	14.3
Industrial	1,058,209	2,584,926	34.3
Banks & Finance	290,679	514,868	6.8
Insurance	201,450	490,495	6.5
Investment Trust	25,000	49,350	.7
TOTAL COMMON STOCKS	\$ 2,108,589	\$ 4,939,243	65.5
TOTAL GENERAL FUND	\$ 4,594,598	\$ 7,397,139	98.1
WINTHROP FUND	\$ 88,270	\$ 133,517	1.8
WEBER FUND	\$ 10,500	\$ 10,166	.1
GRAND TOTAL	\$ 4,693,368	\$ 7,540,822	100.0%

*Cents omitted

OPERATING ANALYSIS

(for the period ended October 2, 1960 (53 weeks))

Income from Patients	\$ 2,689,300.74
Income from Other Sources	168,444.32
TOTAL GROSS HOSPITAL INCOME	\$ 2,857,745.06
Allowances to Patients for "free care"	183,786.23
Further Deductions for Bad Debts	(664.00)
Allowances to Blue Cross and Other Agencies	106,954.35
TOTAL FREE SERVICE	\$ 290,076.58
NET INCOME	2,567,668.48
Salaries and Wages	\$ 1,581,102.26
Supplies and Expenses	794,655.19
Clinic Expenses	275,739.28
Extraordinary Expenses	4,946.18
TOTAL OPERATING EXPENSES	\$ 2,656,442.91
DEPRECIATION	\$ 78,466.23
HOSPITAL DEFICIT	88,774.43
TOTAL HOSPITAL DEFICIT	\$ 167,240.66

HORACE W. FROST
Treasurer

ONE HUNDRED AND THIRTY-FOURTH ANNUAL REPORT

Administration

Chaplain Service

Chaplain The Rev. Bruce Jones

Nursing Department

*Director of Nursing Service and Nursing Education Mrs. Margaret Verrill, R.N.
Assistant Director of Nursing Service Pauline Metras, R.N.*

Directors of Departments and Units

Comparative Statistics

HOSPITAL

	1959	1960
Service Patients—Eye Cases	1,451	1,546
Ear, Nose and Throat Cases	1,613	1,540
Total Service Patients Admitted	3,064	3,086
Private Patients—Eye Cases	3,124	3,381
Ear, Nose and Throat Cases	2,826	2,886
Total Private Patients	5,950	6,267
TOTAL PATIENTS ADMITTED	9,014	9,353
Operations, Service—Eye Cases	1,392	1,545
Ear, Nose and Throat Cases	1,355	1,295
Operations, Private—Eye Cases	3,258	3,579
Ear, Nose and Throat Cases	2,761	2,880
TOTAL OPERATIONS	8,766	9,299

CLINICS

New Patients—Eye Clinic	4,612	4,707
Ear, Nose and Throat Clinic	3,012	2,891
TOTAL NEW PATIENTS	7,624	7,598
Revisits—Eye Clinic	40,558	42,248
Ear, Nose and Throat Clinic	22,638	21,443
TOTAL CLINICAL REVISITS	63,196	63,691
Visits—Eye Clinic	45,170	46,955
Ear, Nose and Throat Clinic	25,650	24,334
TOTAL CLINICAL VISITS	70,820	71,289
Emergency Patients Admitted to Hospital	265	242
Patients Admitted to Emergency Ward	8,446	8,982

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Comparative Statistics

	1959	1960
Patients Days Care—Service	19,465	19,815
Private	32,137	33,100
TOTAL PATIENTS DAYS CARE	51,602	52,915
Average Number of Patients Treated Daily—		
Service	54	53
Private	88	89
TOTAL AVERAGE TREATED DAILY	142	142
Average Number of Days Patients Remain—		
Service	6.3	6.4
Private	5.4	5.3
Beds Available and Percent of Occupancy—		
Service	73 74%	66 81%
Private	96 91%	103 87%
TOTAL BEDS AVAILABLE	169	169
Per Capita Cost Per Day—Service, Routine Care	\$24.04	\$24.76
Special Services	9.89	11.32
TOTAL COST PER DAY PER SERVICE PATIENT	\$33.93 (A)	\$36.08 (A)
Per Capita Cost Per Day—		
Semi-Private, Routine Care	\$26.71	\$27.51
Special Services	10.99	12.58
TOTAL COST PER DAY PER SEMI-PRIVATE PATIENT	\$37.70 (A)	\$40.09 (A)
Per Capita Cost Per Day—Private, Routine Care	\$30.72	\$31.63
Special Services	12.65	14.47
TOTAL COST PER DAY PER PRIVATE PATIENT	\$43.37 (A)	\$46.10 (A)
Condition of Patients on Discharge—Died	14	12
Autopsies	50%	33 $\frac{1}{3}$ %
Left Against Advice	0	0
Discharged	8,954	9,346

(A) Overhead Ratio 27%

MASSACHUSETTS EYE AND EAR INFIRMARY

The Clinics

Boston Eye Bank Serving New England

General Director—Edward C. Sweebe, M.D.

Executive Secretary—Cynthia P. Burns

Executive Committee

Edwin B. Dunphy, M.D.

Henry Hixon Meyer

Brendan D. Leahey, M.D.

Mrs. Richard Cary Curtis

Mrs. William A. Slade, Jr.

Mrs. Virginia Gerould

Esophageal Voice Classes

Director—Mrs. Paul A. Doepler

Glaucoma Consultation Service

Director—W. Morton Grant, M.D.

Retina Service

Director—Charles L. Schepens, M.D.

Winthrop Foundation and Clinic for the Deaf

Director—Donald K. Lewis, M.D.

Surgeons

Philip E. Meltzer, M.D.
Robert E. Klotz, M.D.

Francis L. Weille, M.D.
Bernard Zonderman, M.D.

Audiologist

Albert W. Koch, Ed.D.

Report of the President

DURING the last 10 years the Infirmary has attained a position of high, possibly highest rank among the specialty institutions of its kind. This has been made possible by devoted efforts of many people within and without the Infirmary and by financial support from a host of individuals, funds, foundations, corporations, trusts and governmental agencies. They have expressed their confidence and have created an obligation which the Infirmary must recognize by doing all in its power to meet the demand for its services.

For our country and every citizen, health is vital. Without health neither national nor individual goals can be achieved. And the problems of health are magnified by our expanding population, by the explosive increase in the numbers of elderly and by a growing appreciation of and demand for competent medical care. The answers, of course, are obvious. Medical care must be made more available and improved in quality; research must be expanded; and more doctors must be produced to heal the sick, to engage in research and to teach more and more doctors. These will be the goals of the Infirmary within its specialties.

Patient care, research and teaching are related and indivisible. They must be conducted side by side in the closest environment. It is important that new developments in research laboratories be made available for treatment of patients at the earliest practicable moment. It is important that those engaged in research be able to observe at first hand the effect upon patients of new developments.

It is important that teachers and students alike, in their study of disease and search for knowledge, work in close contact with patients and those engaged in research. And in the case of a specialty hospital such as the Infirmary, continuous intercourse must be maintained between its staff, the faculty of the medical school and the staff of a general hospital. All lines of communication must be kept open and used continuously to produce the greatest benefit for all. The facilities of the Infirmary and its close relationship with the Massachusetts General Hospital have produced the kind of environment I have described.

NEW HOSPITAL COMPLEX

A study is now in process to determine whether or not it would be profitable and feasible for four great hospitals in the Longwood Avenue area—Peter Bent Brigham, Boston Lying-In, Free Hospital for Women and Robert Breck Brigham Hospital—to come closer together in a new structure or structures to be erected adjacent to the Harvard Medical School and the Children's Hospital and connected to both. There is no thought of a merger but instead, a joint effort by the group. Each would maintain its own identity but all would profit by joint operation of certain facilities and by the creation of an environment calculated to produce better patient care, more effective research and improved teaching.

It has been suggested that the Infirmary provide service in its specialties for this group and this suggestion is now in the process of study. The Infirmary has no intention of moving from Charles Street and the provision of service at a second location raises many problems. However, there are a number of interesting possibilities which weigh heavily in favor of the proposal. It would permit an expansion of patient care, research and teaching which is impracticable at Charles Street where the Infirmary is hemmed in by public streets and the Massachusetts General Hospital; it would bring the medical staff of the Infirmary in closer contact with the faculty of the Harvard Medical School; and in the clinical field would create new relationships with the staffs of the hospitals in the Longwood area.

It is axiomatic that progress is not made by standing still. The tortoise and the hare proved that. The tortoise also proved, according to my interpretation of the fable, that deliberate motion in a carefully plotted course is more effective than erratic leaps and bounds, even if the latter lead in the end to the same finish line at approximately the same moment. Sweet repose undid the hare. May it never overtake the Infirmary.

HENRY HIXON MEYER
President

Report of the Director

MUCH time and thought have been given to the future needs of the Infirmary during the past year and to plans for relieving the increasing pressure for additional beds and research space.

Two important decisions were made. Perhaps the most vital and difficult was the decision by the Board of Managers to remain in our present clinic building and not to join the Massachusetts General Hospital in its plans for a new ambulatory building to be constructed across Fruit Street. The majority of the medical staff indicated they would prefer to operate the clinics in the present building because it is adjacent not only to the hospital facilities but also to the clinical research laboratories located in the same building. Even for those patients referred from our clinics to the M.G.H. and vice versa, the steps will not be excessive and the advantages will greatly outweigh the disadvantages.

The other major decision, this one made by the Planning Committee, was to abandon the many attempts to plan for bed expansion at our present limited site. After hours of painstaking study, it was agreed that any building on our land would be so cramped as to be impractical both in cost and efficiency.

The possibility of establishing a branch as part of the Hospital Complex in the Longwood area near the Harvard Medical School is, therefore, being considered with great interest.

To illustrate the need for additional space, the following statistics demonstrate dramatically the increased use of our present facilities:

	1952	1954	1956	1958	1960
Patients Admitted	6,552	6,958	7,718	8,677	9,353
Operations Performed	5,996	6,560	7,318	8,418	9,299
Clinic & Emergency Visits	68,897	66,239	69,309	77,734	80,271
Total Patient Days	43,016	46,079	49,268	49,045	52,915

There is every indication that these trends will continue and that additional space for expansion is imperative.

FINANCES

The cost of operating the hospital continued to rise during the year and was six and one-half per cent higher than the previous year. This increase is not out of line with the national average and, to a large extent, resulted from an across the board in-

crease in nursing salaries in our entire metropolitan area. In spite of increased costs, the Infirmary was able to avoid an operating deficit.

During the 12 month period, room rates were raised \$4 per day for service and semi-private accommodations and \$6 for private rooms. Charges for ancillary services such as operating rooms, x-rays, and laboratories were reviewed and remained unchanged except for minor adjustments. This is in line with our policy of charging in relation to costs for the various categories of service rather than following the easier tendency of undercharging for room service and overcharging for ancillaries.

Two favorable factors developed during the year which we believe will materially improve payments to the Infirmary from third parties. As a result of legislation sponsored by the Massachusetts Hospital Association, Public Welfare will pay hospitals the Massachusetts reimbursement rate for tonsil and adenoid operations, of \$31.76 per day instead of \$25 per admission. This is an important adjustment to us as these patients remain at the Infirmary for two days. In addition, Blue Cross has liberalized their payments on T&A's which will benefit both Blue Cross subscribers and the hospital.

Following requirements of the Massachusetts Division of Hospital Costs and Finances, the method of figuring depreciation was changed this past year. The Infirmary's plant accounts and related allowances for depreciation have been adjusted to reflect actual costs of plant assets and

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Total Patient Days	43,016	46,079	49,268	49,045	52,915

accumulated depreciation thereon, based on the useful life of such assets.

Free service—care for indigent patients paid out of special hospital funds—amounted to \$295,000 for the year, the highest in Infirmary history.

CLINIC PROGRESS

Admission fees for the Clinics were also raised from \$3.00 to \$3.50. This rate is still considerably

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below the cost of operating the Clinics. One factor that will be helpful is the announcement by Public Welfare that payments for clinic visits will be advanced from \$2.50 to \$3.00

The Clinics' credit and collection office, established this year, not only greatly improves the method of billing patients but also provides a more businesslike way of handling collections. It is a satisfaction to find that more and more clinic patients have commercial insurance, union welfare, fraternal organizations or other group health coverage providing ambulatory care.

LIBERALIZED PERSONNEL POLICIES

During the hospital year, personnel policies were reviewed and in many ways liberalized in line with the Massachusetts Hospital Association's study for the unification of such policies by geographic areas. These steps are especially significant in light of the personnel problems encountered in the past year by hospitals in neighboring states and other areas of the country. The minimum wage at the Infirmary is now \$1.15. Cumulative sick leave has been increased from 10 to 50 days, and a grievance procedure has been spelled out and put on paper so that a dissatisfied employee can appeal his case after his department head has reviewed it.

INNOVATIONS AND MODERNIZATIONS

Continuing its plan of modernization, the Infirmary installed a central dictation system which greatly facilitates dictating records by the medical staff. Under the new installation, a doctor picks up any telephone in the hospital and dials "20" which automatically connects him to a recording machine in the record room for his dictation. This not only makes it easier for the doctor but also more efficient for the transcription department of the Record Room in levelling the work load.

A further innovation during the year was the installation of IBM equipment adjacent to the accounting office. A three-year program has been laid out to take care of our present load and anticipated increasing future volume.

A new elevator was installed to replace one that had become obsolete. As a result, the speed of transportation to the hospital's main five floors has improved spectacularly. The renovations in the ENT Clinic and the installation of new treatment units in the Eye Clinic were carried out. Another efficiency step, in line with the successful central purchasing, was the decision of the trustees to join the Associated Hospital Laundry, formed to handle the work of seven or more hospitals in the area.

With the approval of the Library Committee and on request of the librarian, the Howe Library was reviewed, from a policy point of view, by a librarian

of the Harvard system. The excellent report was accepted in entirety by the Library Committee and recommended changes put immediately into effect, resulting in a stronger library set-up.

The program of the Occupational Therapy Department was also reviewed. Because of the change in emphasis in patient care and the shorter average stay, it was decided to reduce this department from three therapists and students from two universities, to one therapist.

The Joint Commission on Accreditation of Hospitals, making its examination of the Infirmary in August, gave accreditation for one year only instead of the customary three years. The recommendations of the Commission now being followed should improve our medical records and will result in a complete revision of the medical staff bylaws.

I regret that there is not space to include a fuller report of the Medical Social Service Department because we are so proud of its accomplishments during the year. This is one of the departments that runs with a minimum of hospital supervision and maximum efficiency within its important field. Our social workers also make a substantial contribution to the community by participating in many programs outside the hospital.

Highlights of the Social Service report showed a workload of 2,251 patients served during the year with particular emphasis on follow-up of glaucoma patients, substantial increase in tumor clinic patients and an ever-increasing number of children with hearing losses referred to the Ear Service in the Clinic for the Deaf. The Department was particularly pleased to be able this year to engage an M.G.H. staff psychiatric consultant to assist with the more complex social problems met by our social workers.

No report of the year would be complete without a word of appreciation to the Dietary Department for the many meetings for which refreshments were served often either at their busiest time of day or after regular hours. During the year, our dietary personnel "catered" 32 luncheons and dinners and supplied coffee and/or tea to 75 gatherings. Board of Managers' luncheons, medical staff dinners, Ladies Visiting Committee teas and many similar group meetings were made possible by the efficient cooperation of the Dietary Department.

In conclusion, I would like briefly to summarize needs of the Infirmary which are becoming more urgent with each passing year. First and foremost we need land which will give us room to expand our facilities in patient care, teaching and research. At present many of our staff are forced to take their patients to other hospitals. We are also under great pressure to provide additional research space for both services. The staff feels strongly that the In-

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firmary should have an auditorium capable of seating 250 where staff and medical society meetings may be held in proximity to the clinics and laboratories.

A speech and hearing center under the auspices of a teaching hospital has been named as one of the real needs of this area; the Eye and Ear Infirmary is the logical institution to establish such a project. Plans for this center are under consideration.

Essential to these space needs is additional parking facilities. The parking area opposite the hos-

pital is shared by the MGH and given to the Infirmary by a permit from the Metropolitan District Commission. This permit allows hospital staff, personnel, patients and visitors to park there in the daytime but opens the area to the general public in the evening. This makes the space difficult to control as some of the general public do not remove their cars in the morning. The solution to the parking problem is still very much to be solved.

FRANCIS S. HILL
Director

1961 Service Awards

Members of the Medical Staff who have served 25 consecutive years on the active staff:

Elizabeth DeBlois, M.D. <i>Assistant Surgeon in Otolaryngology</i>	Mahlon T. Easton, M.D. <i>Surgeon in Ophthalmology</i>
Joseph Lentine, M.D. <i>Surgeon in Otolaryngology</i>	

Thirty Year Pin:

Ruth Adair <i>Social Service</i>	Anita Mangiaracine, A.B. <i>Bacteriologist</i>
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Twenty Year Pin:

Mildred James, R.N. <i>Nursing</i>	Elizabeth Towle <i>Winthrop Foundation</i>
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Ten Year Pin:

Emilie Farnsworth <i>Social Service</i>	Ann Christie <i>ENT Clinic</i>	Jessie Jones <i>Nursing</i>
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Department of Otolaryngology

THE Otolaryngological Department has continued to progress in its varied medical services to the patient, the training of residents and in scientific development through clinical and laboratory research. New surgical techniques for the improvement of hearing have been practiced with great satisfaction, particularly the procedures of stapedectomy. The surgical treatment of the chronically discharging ear has also given great satisfaction, not only in curing the disease but also in conserving hearing.

Residency training, as developed by Dr. LeRoy A. Schall and his associates, has been continued by me as it is considered to be one of the best rounded programs in the country. Presently, after completion of the internship, residents are required by the American Board of Otolaryngology to have an additional year of surgery at an acceptable institution of their choice before beginning an ear, nose and throat residency at the Infirmary.

The constant increase in the number of patients treated in the Ear, Nose and Throat Clinic has made it necessary to augment the number of staff doctors. Some former residents, heretofore not members of the active staff, have graciously accepted my invitation to give their services, even though it entails considerable travel on their part.

In the past it had been the custom, with a few exceptions, for Senior Surgeons, when their active service terminated and they became Senior Consulting Surgeons, abruptly to dissociate themselves from hospital activities and to devote their time entirely to private practice. It seemed to me that the Infirmary and the patients were being deprived of much ability and I, therefore, asked Dr. Charles H. Allman, Dr. Maurice G. Evans, Dr. Robert L. Goodale, and Dr. Moses H. Lurie each to give one day a week in the Clinic. They are now functioning as consultants for the younger staff members and as teachers for the residents.

A further opportunity for our residents to benefit by the exchange of ideas with a widely experienced group is offered by the Journal Club with the programs arranged by Dr. Philip Mysel from the Veterans Administration Hospital, Dr. William W. Montgomery of our staff and Dr. M. Stuart Strong of the Boston University School of Medicine. Talks that keep members informed on otolaryngological literature and general medical subjects as well are given by Infirmary staff members and men from

the Boston University School of Medicine, Boston City Hospital, Lahey Clinic and the Massachusetts General Hospital.

THE CLINICS

The Ear, Nose and Throat Tumor Clinic, housed on White 2 of the Massachusetts General Hospital, has continued, under the direction of Dr. Daniel Miller, to serve the largest patient load of any section in this joint hospital service. The greatest number of all patients considered to have a reasonable chance of cure from x-ray therapy were referred to the Tumor Clinic by the Ear, Nose and Throat Clinic and by members of the Infirmary staff. The results in treatment of early cancer of the larynx by radiation therapy have been most gratifying.

A new program has been initiated utilizing chemotherapy in intra-arterial infusion for the control of cancers in the head or neck which failed to respond to x-ray or surgery. Various chemotherapeutic agents are being tried, the first of which, 8-azo-guanine, is already showing great promise of palliation.

This past year, under the direction of Dr. Edgar M. Holmes, a series of lectures on plastic surgery was given to the House Officers as part of their educational program. This will be repeated yearly so that all the men may have a basic understanding of the problems and procedures in plastic surgery before assuming the responsibility of that Service. The Service handles all the maxillo-facial and plastic problems relating to the head that are admitted to the hospital or come to the Clinic.

The Atrophic Rhinitis Clinic has continued its work of clinical and surgical treatment of this distressing nasal condition. Dr. Herman J. Sternstein arranged for histochemical studies during the year which were carried on with the assistance of the Massachusetts General Hospital, Department of Pathology, to categorize normal nasal mucosa and its various nonatrophic alterations as possible clues to the etiology of squamous metaplasia in ozena.

Dr. John R. Richardson continues as Director of the Endoscopic Clinic. Foreign bodies of the air and food passages are generally seen at this hospital, whereas medical problems dealing with the trachea and bronchus are managed at the Massachusetts General Hospital where our residents rotate under the direction of Dr. Edward B. Benedict. Patients with esophageal strictures are treated in co-opera-

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tion with the Infirmary x-ray department. The combination of x-ray observation and bouginage has been most beneficial for these patients.

The demands made of Mrs. Paul A. Doehler during each year testify to her recognition as an outstanding teacher in esophageal speech for patients who have had laryngectomies. She has lectured to hospital staffs and cancer society groups in both this country and in Canada and has appeared on radio and television programs in connection with many of these speaking engagements. This year her teaching program took in 143 new students which is an all-time high. Correspondents from all over the world have prompted Mrs. Doehler to distribute esophageal speech exercise cards in Spanish, French, German and Italian. This year she was awarded a replica of the Sword of Hope by the American Cancer Society in recognition of her work with laryngectomees.

The Voice Therapy Clinic continued its work with patients suffering from hoarseness as a result of lesions of the vocal cords. Many of these patients are cured or greatly relieved by the techniques developed by Mr. David Blair McCloky of this Clinic.

THE FREDERIC WINTHROP FOUNDATION

The Winthrop Foundation is the investigative service for all the new medical and surgical procedures for the improvement of hearing mentioned in the introduction of this report. This year directorship of the Foundation passed from me to the able hands of Dr. Donald K. Lewis.

The clinic load of patients seeking surgical relief of deafness due to otosclerosis has increased tremendously with 189 stapes operations performed last year. The Winthrop Foundation surgical team has been evaluating the latest surgical procedures including complete stapedectomy with prosthetic replacement of the stapes by means of tissue grafts held with polyethylene tubing or tantalum wire.

Psychogenic deafness in children has been studied jointly by the Foundation and the Massachusetts General Hospital Department of Child Psychiatry under a grant from the Noonan Fund. For these and other patients, the services of the Foundation's social worker and psychologist are invaluable.

LABORATORIES: CLINICAL AND RESEARCH

Under Dr. Werner Mueller's direction, coverage in the histopathological and clinical laboratories has continued to include several hours on Sunday afternoon and during the early evening, to take care of the unusually large number of preoperative determinations needed for Monday morning without burdening the busy resident staff. The number

of determinations carried out has been increased by the routine examination of all tonsil and adenoid tissue removed from both service and private patients, in accordance with requirements of the Joint Commission on Accreditation of Hospitals.

Dr. George Kelemen, chief investigator of the Temporal Bone Laboratory, has been concerned with research in the pathology of congenital deafness, with emphasis on intra-uterine diseases and the insult to the embryo. In the field of comparative otolaryngology, studies are being conducted on laboratory animals on spontaneous pathological conditions, such as severe ear lesions of the squirrel monkey—studies which are of practical importance in this age of space travel. Other studies are being continued on the anatomy and physiology of the larynx of the howler monkey and tropical giant bat.

Studies in the Microcirculatory Laboratory, under the direction of Dr. John W. Irwin, have continued in regard to the circulation of the fluids of the inner ear, the pressure gradient in both the general and pulmonary circulations, and the changes which occur in the small blood vessels during inflammation and with allergic reactions. Projects initiated during the past year included studies of the effects of various viruses on the inner membrane of living blood vessels, of the effects of inhibiting agents on circulation in the small blood vessels and of the intravascular phenomena which occur during anaphylaxis.

In association with the Massachusetts Institute of Technology and under the direction of Professor Walter A. Rosenblith, the Eaton-Peabody Laboratory has made significant progress in the study of the basic physiological processes in hearing.

Several clues to the way acoustic information is coded in the nervous system were given by the recording of the electrical responses from the cells in the dorsal cochlear nucleus, a way station of the auditory pathways. The patterns recorded in the laboratory have been examined by the use of the computers at MIT. Dr. Nelson Y-s Kiang and the laboratory staff have noted several striking results, indicating a relation between the spontaneous pattern of firing and the pattern of response to stimuli at high repetition rates.

A procedure that is now routine in the laboratory is the recording of patterns from single cells in the auditory cortex of unanesthetized animals with implanted chambers for electrodes. Average responses computed from recordings made with the implanted gross electrodes on the auditory cortex of cats have led to the conclusion that workers who have based their cortical conditioning work on ERG records of worked responses have been dealing with a response different from the classic worked response that has been studied by neurophysiol-

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ogists. However, sufficient data has not yet been obtained to make general conclusions. In a study of auditory-nerve response, it has been shown that the initiation of nerve impulses in the auditory nerve may be controlled not by a single mechanism but rather by several mechanisms.

In March 1960 the Biochemistry Research Laboratory of the Otolaryngology Department was opened. One of the first projects to be undertaken was a study of the structure of proteins. Model-known proteins were selected for the working out of methodology and laboratory techniques. When the techniques on these known proteins are refined and proved, the study will be transferred to the proteins involved in the complicated neurophysiological process of hearing.

Other studies are concerned with the synthesis of hemopeptide derived from cytochrome C, a catalytic protein of the respiratory processes. A third project is aimed at the synthesis of nucleotideprotein conjugates to be used in an immunochemical investigation of antibody formation toward components of nucleic acids. The program is under the direction of S. Peter Marfey, Ph.D.

The Research Histology Laboratory, originally under the direction of Miss Sandylee Weille, continues to process tissues from experimental animals for all the otolaryngological research laboratories. Work on soft tissues, such as lung, is done with paraffin techniques, while work on tissue such as temporal bone utilizes celloidin methods. Dr. John Walter and Dr. Kiang have continued to introduce new techniques.

The Virus Laboratory, under the direction of Dr. Robert S. Gohd until July 1960, developed a method for the growing of influenza viruses on a single layer of epithelial cells and applied this method to the development of viral vaccines. The new method should result in vaccines that will be several thousand times more pure than those now in use and should also throw light on how and in what manner viruses attack and destroy individual cells. Radiation studies disclosed that more than one million Roentgen units failed to destroy the tissue's ability to synthesize viruses, whereas 500 R killed mice. Chemical compounds that appear to possess antiviral activity were tested in the laboratory and seemed to promise considerable clinical interest.

Experimental animals play an important part in medical research; indeed such research would be impossible without them. The Research Animal Farm of the Otolaryngological Department, although too small for present needs, is an outstanding unit. Excellent cleaning methods and meticulous care and feeding have resulted in keeping the animals in good health and long life for the benefit of medicine.

OTOLARYNGOLOGICAL LIBRARY

The first decade of the Ear, Nose and Throat Library, directed by Mr. Charles Snyder, Librarian, ended in 1960 and has been a period of planned growth impeded only by lack of space. As the Library begins its second decade, on its shelves will be found 90 per cent of the world's otolaryngological journals—40 journals in eight languages—and every English language textbook of high professional standing in the field. In addition, there will be found selected items from general medicine and surgery to make up a book and journal collection suited to the needs of our surgeons and residents. This library has been financed from the Ear, Nose and Throat Professional Fee Fund. Another important group of Library patrons is derived from the members of the otolaryngological research laboratories. Their generosity has made possible an excellent beginning in establishing a library collection in the basic sciences. This program, an expensive one, is only a little more than two years old and its value will increase as the collection grows.

From the foregoing description of activities, it is evident that the Otolaryngological Service has continued to be progressive in all departments. Because my original appointment was as Interim Chief, I purposely made no effort to introduce any innovations that my successor might not wish to continue but rather have carried on the general program of the former Chief, Dr. LeRoy A. Schall, which has so successfully fulfilled the requirements of patient care, resident training and research.

PHILIP E. MELTZER, M.D.
Chief of Otolaryngology

Department of Ophthalmology

THE Eye Clinic is somewhat unique in that the senior ophthalmic surgeons actively participate in the care of patients and in teaching the residents and medical students on the spot. Perhaps this is why, in spite of the general tendency for patients to consult private physicians, our clinic has shown no loss in patient census; this past year there were 46,995 clinic visits.

House admissions also continue to rise on the Eye Service, 4,927 patients being admitted in the past year and 5,124 operations performed.

CLINIC SPECIAL SERVICES

Among the various sub-divisions of the Eye Clinic, the Refraction Department is one of the most important. The total number of refractions done was 9,266, about the same as the previous year. Approximately 57% of these were done by paid refractionists and 43% by our residents. The American Optical Company has generously replaced their refraction units with the latest models. A recent innovation for this department has been the teaching of contact lens techniques to residents.

The Glaucoma Consultation Service continues to expand; 3,431 patient visits were recorded. Dr. Eeva-Lisa M. Martola of Finland has been assisting Dr. Raymond Harrison in this department. She and Dr. Harrison have done an interesting study on 110 Spanish American War Veterans whose average age was over 80 years, and some data uncovered in this investigation will be published soon.

Another project of interest, the use of intravenous urea as an ocular hypertensive agent, was undertaken by Drs. Kevin Hill and Jeremy Whitney of the Resident Staff.

Last June the one week course in glaucoma was attended by 15 ophthalmologists from various parts of the country.

The Perimetry Room performed 1,546 visual field examinations. The appointment of Dr. Julian Fodor as part-time perimetrist has proved most helpful in clearing up the backlog of work in that department.

In the Ocular Motility Clinic a total of 4,979 patient visits were made. This active department continues to give a one year training course for orthoptic technicians.

During the year the Retina Service saw 2,300 patients, performed 185 service operations and 1,035 private operations, a definite increase over the

previous year. Dr. Charles L. Schepens and his staff continue to give a year's training to from 6 to 8 ophthalmologists who come to Boston to learn special diagnostic and surgical techniques in the care of patients with retinal detachments.

Further advances were made by Drs. Schepens, I. D. Okamura, R. J. Brockhurst and C. D. J. Regan in the procedures used in retinal detachment surgery. Implantation of soft silicone has completely superseded the use of polyethylene tubing, and the circular polyethylene tube with its suture has been replaced by a silicone band with a tantalum clip.

Progress has been made by Drs. Schepens, Okamura, J. G. Dobbie, and J. W. McMeel in the management of detachment with giant retinal breaks. Bed rest in a prone position, head down, was found to be most effective and operation in the bed rest position has been useful in several instances. A special stage has been constructed for this purpose and is being perfected. Multiple minute incarcerations of the retina in the choroid near the edge of the retinal break have been helpful in reattaching the retina.

HOWE LABORATORY

The individual report of the Howe Laboratory contains the details of its activities but here follows an abbreviated summary:

In the field of glaucoma, Dr. W. Morton Grant has subjected his vertical applanation tonometer to a series of tests on normal and glaucomatous eyes. The measurements are determined on patients in the sitting and recumbent positions and compared with standard Schiotz and tonographic measurements. Various enzymes and experimental surgical procedures have also been tested systematically for possible therapeutic application to glaucoma but without, as yet, conclusive results. While the foregoing studies revolve about the outflow mechanism and its aberration in glaucoma, Dr. Carl Kupfer is attempting to evaluate the inflow and its variation under physiologic conditions. These studies, utilizing a technique in which polyethylene tubes are implanted in the anterior chamber, permit a monitoring of aqueous humor flow over a period of several weeks.

Retinal vascular patterns have been the subject of an intensive investigation by Drs. T. Kuwabara, J. Carroll, D. G. Cogan and D. Toussaint. It is believed that the retina affords a unique opportunity to study the pathology of the minute vessels of the body and most particularly to elucidate the

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significant changes with hypertension, diabetes and other systemic and local ocular diseases. The glycogen content of the retina has also been studied and its distribution mapped out histochemically. Glycogen appears to have the same localization in the retina as has previously been demonstrated for the glycolytic enzymes.

Studies on the lens, always aimed at the ultimate understanding of cataracts, have included a demonstration of some of the enzymes involved in protein metabolism and a determination of the rate limiting steps in energy production. These studies, conducted by Drs. J. H. Kinoshita and A. Spector, have been extended to a collaborative project with Dr. R. Carpenter, Tufts University, on the early chemical changes in experimental cataracts resulting from microwave exposure.

The process of photoreception whereby a light impulse is absorbed and converted into a nervous impulse has, perhaps, approached slightly nearer to an understanding by the discovery of an improved test for retinene. This test, devised by Dr. S. Futterman in collaboration with Dr. L. D. Saslow of the Armed Forces Institute of Pathology, has the advantage of differentiating retinene from its precursor vitamin A.

The enigma of color perception has been subjected to an experimental study by Drs. D. D. Donaldson and R. M. Pinkerton. An apparatus has been devised for testing the relative lag in perception with different colors, a phenomenon known in physiologic optics as the "fluttering heart."

A simplified test for herpes simplex infection has been developed by Dr. H. Kaufman utilizing the fluorescent antibody technique and a test for toxoplasmosis is under development based on clumping of red blood cells coated with suitable antigen.

The question of whether or not the cells of corneal transplants survive or are replaced by the host cells is at long last about to be solved. Dr. Kuwabara has devised a technique for demonstration of the sex chromatin in stromal cells so that it will be possible to differentiate between host and donor tissue. In a collaborative project with Dr. E. C. Sweebe, experimentally transplanted corneas are now being removed at different times after surgery to be analyzed for their content of host and donor cells.

Two noteworthy organizational events occurred in the laboratory in the past year. One was the acquisition of new laboratory space on the roof, the new quarters made possible by grants from the Lions Clubs of Massachusetts, the Public Health Service, the Infirmary and certain private donors. The other is the acquisition of a fine electron microscope, purchased with a grant from the Public Health Service to facilitate studies on the retina.

Dr. David G. Cogan, Director of the Laboratory, has been named Chief Editor of the Archives of Ophthalmology.

For the Lucien Howe Library of Ophthalmology, 6,206 patron visits were reported with 2,978 items circulated on loan, 703 of these borrowed from other libraries. While attendance for the year was 643 less than the previous year, circulation was only off by 91 items. Book stock was increased by 146, 64 of these being textbooks, 68 bound journals, and 14 gift volumes. The present inventory of the Howe Library reads: textbooks, 2,864; bound journals, 1,722; pamphlets, 1,831, with total holdings, 6,417.

RETINA FOUNDATION

Herewith is an abbreviated report on the activities of the Retina Foundation. Dr. C. L. Schepens in cooperation with O. Pomerantzeff continued work on the development of a modified indirect stereoscopic ophthalmoscope for the examination of the fundus through a small pupil. W. J. Stenstrom modified the Zeiss fundus camera to make it easier to obtain pairs of stereophotographs of the fundus.

Drs. E. Wolf and S. Grupposo continued their investigation on retinal function before and after retinal detachment surgery. Special emphasis was placed on light sensitivity measurements, measurements of anisokonia and tests for low vision aids. Light and glare sensitivity studies were also made by Dr. Wolf on normal subjects of various age and on subjects with different kinds of abnormalities.

Drs. C. H. Dohlman, D. O. Hedbys and S. Mishima worked out a method to measure the swelling pressure of corneal stroma *in vivo* and *in vitro*. Dr. David Maurice of the Institute of Ophthalmology of London was co-worker on this project during his two months stay at the Foundation.

Dr. M. A. Jakus continued her studies on the fine structure of the cornea and the lens capsule. She found that the fine structure of the periphery of the human cornea is markedly different from that of the central cornea.

In collaboration with Dr. T. C. Laurent, Dr. A. Anseth developed a method for the quantitative preparation and fractionation of the polysaccharides of the cornea. This method was used to study the normal cornea of various species and corneal wound healing in rabbits. Dr. Laurent also studied the physicochemical properties of acidic glycosaminoglycans and related these to their physiological function. It was shown that when macromolecules and virus particles move in a hyaluronic acid solution, the hyaluronic acid molecular network acts as a sieve.

Dr. U. Laurent, with Dr. T. C. Laurent, fractionated the proteins of the vitreous body by means of

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column chromatography. At least two of these fractions were found to be made up of acidic glycoproteins. Immunochemical studies by Dr. A. F. Howe on the same protein fractions showed that some of the proteins do not cross-react with immune sera to plasma proteins, indicating that they may not originate from blood serum. Studies on the influence of immunological reactions, certain chemical treatments, and irradiation on the structure and function of the "blood-vitreous barrier" were continued by Dr. Howe.

Dr. A. Martonosi continued his studies on the mechanism of the polymerization of actin, an important protein constituent of muscle, with a view of relating certain chemical events to the contraction process.

Drs. L. Toth and E. A. Balazs studied the effect of gamma radiation of the vitreous gel. The degradation of the hyaluronic acid in the gel causes a decrease in its rigidity and volume. Dr. Balazs also developed a column chromatography method for the purification and molecular fractionation of hyaluronic acid from such tissues as vitreous body, synovial fluid and umbilical cord. He continued his physicochemical studies on normal and arthritic human synovial fluid with special regard to the molecular size of hyaluronic acid.

Drs. J. Gergely and E. A. Balazs, in collaboration with Dr. J. S. Waugh of the Chemistry Department of the Massachusetts Institute of Technology, continued their investigation on the waterbinding of various macromolecules with the use of proton magnetic resonance techniques. Dr. J. Van der Veen, using the same techniques, started investigations on the chemical structure of various carbohydrates and on the ionization of dicarboxylic acid.

OPHTHALMIC PLASTICS LABORATORY

The focus of the work of this laboratory has been developmental surgery of the cornea and of glaucoma. This has been complemented with basic research in wound healing of the cornea and study of the cause of glaucoma, as related to fluid transport.

Newer methods of lamellar corneal transplantation are being studied. These involve freezing the donor cornea and machining the transplant on a lathe to develop very highly polished surfaces to decrease scar areas in the healing process. It is hoped that this will improve optical results over previous lamellar transplant methods.

Plastic artificial corneas have been successful in rabbits and in rhesus monkeys. The case records of the Infirmary have been culled and patients are now being prepared for the first human operations.

Farida Saad, Ph.D., is studying the collagens of the cornea and the differences between opaque and transparent tissue collagens. She has found that

the extractability of collagens of the cornea is significantly different from that of other tissues. This may indicate a difference in chemical composition and structure. The ultimate purpose of this study is to determine the manner in which collagen contributes to the transparency of the cornea by studying the types of collagens which are present, and the chemical makeup of these collagens.

Nucleic acids in normal, injured and transplanted corneas are being studied by Seymour Zigman, Ph.D. This work is designed to determine the manner and degree in which loss of transparency is based on changes in nucleic acid metabolism.

With the help of Dr. J. Sebestyen, study of new procedures to increase good results in glaucoma surgery is in progress. Silicone rubber fashioned as tubes to drain the eye to subconjunctival and suprachoroidal spaces are being used. These tubes have produced successful drains in rhesus monkeys. They are the first filtering operations reported successful in animals.

The second pilot model of a remote-controlled operating surgical microscope is near completion. The first model made it possible for the surgeon to operate upon corneas, do corneal transplants and related procedures under very high magnification without moving his hands from the operative field. The movement of the microscope is controlled by the surgeon's feet. The new pilot model is designed to facilitate corneal transplantation surgery and also certain types of angle glaucoma surgery.

Mr. R. Jahrling continues to fit sockets and make prostheses for clinic and private patients at minimum costs with 170 patients fitted this year. Mr. Jahrling has also developed methods and techniques for motion picture photography of eye surgery and has made several movies depicting the work of eye research.

The Massachusetts Lions Eye Research Fund, the Atomic Energy Commission, the Office of Naval Research, the National Institute of Health and some private benefactors have continued to support the work of this laboratory.

ELECTRORETINOGRAPHY LABORATORY

The electroretinography laboratory under the direction of Dr. B. Ziv has continued investigations for the improvement of recording techniques of the ERG. Most of the basic apparatus was supplied by the Retina Foundation. Activities in this laboratory during the past year have also included explorations of new ideas in varied ophthalmological branches.

A new active electrode for the recording of the ERG has been successfully developed which eliminates existing deficiencies and yields "physiolog-

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ical" responses. This electrode is made of pure 24k gold-ring and is put directly on the cornea. The electrical contact is made by the natural fluids of the eye, replacing the saline solution used in the conventional contact lens electrode.

This achievement opens a whole chain of developments upon which new electroretinographic investigations will be based with much greater objective accuracy.

Among the new developments in the laboratory is a special type of light stimulation for the ERG. It is a minute bulb, 1 x 2 mm in size, which is planned to go directly on the cornea. An electronic system will control and count the amount of light penetrated through the ocular media.

Long range clinical investigations with the help of the ERG, such as the prognosis of operative results in amotio retinae are in progress. In addition, a study on acute glaucoma with high tension is progressing.

An electronic ophthalmoscope based on an entirely new practical concept is also being processed. These activities are in addition to the routine ERG examinations for private and clinical patients.

BOSTON EYE BANK

The past year has seen the Boston Eye Bank continue to grow in all areas. More than 3,100 New Englanders indicated a desire to donate their eyes after death, bringing the number of individuals now registered with the Eye Bank to 15,619. Especially encouraging is the fact that a greater number of eyes were received this year than in any similar period—a total of 278 as opposed to last year's record number of 197. As a result, more tissue was available for corneal transplants; 117 eyes were used for transplants as compared with 96 in '58-'59. Approximately 89 of these operations were performed at the Infirmary, the rest in other parts of New England or in New York City.

As has always been the policy of the Eye Bank, eye tissue not found suitable for transplant was used for research purposes. Since there is a constant shortage of research eyes, the Eye Bank is continuing its attempts to augment the supply through public education. A wide audience was reached through the distribution of nearly 17,000 information leaflets, and by such means as subway display cards, public service announcements on various New England radio stations, and newspaper stories and articles. More personal contact was provided by the presentation of programs explaining the Eye Bank to 44 social, civic, medical and religious groups.

Seven more New England hospitals became affiliated, bringing the number of cooperating hospitals to 115. The Eye Bank continues to be grateful to these institutions for their essential assistance, as it does to the airlines, railroads, and Red Cross

Motor Corps who volunteer their vital services.

There have been two important changes in personnel of the Eye Bank. Dr. Garrett L. Sullivan who has been its director for several years has been succeeded by Dr. Edward C. Sweebe and Miss Nancy Hunt, Executive Secretary, has been replaced by Miss Cynthia Burns. Dr. Sullivan and Miss Hunt have labored long and faithfully to bring the Eye Bank to its present state of efficiency and their help is gratefully appreciated.

In addition to the contributions from various interested groups and individuals, particularly generous financial support was received from Mrs. Richard Cary Curtis, the Sagamore Foundation, the will of Mrs. Charles Irwin Travelli and the Charles Irwin Travelli Fund.

ADOLPH EHRLICH PATHOLOGY LABORATORY

The Eye Pathology Laboratory under Dr. T. R. Smith performed a total of 393 biopsies and the examination of 214 whole eyes, all of these specimens surgical and all examined microscopically. Through the generous support of Mrs. Adolph Ehrlich, some much needed changes were accomplished in the Laboratory.

SOCIAL SERVICE AND OCCUPATIONAL THERAPY

The Eye Service social workers served a total of 1,489 patients during the year. Referrals of private patients show an increase from previous years indicating that illness presents problems to the patient regardless of economic level. Retina patients, particularly those from a distance, have special needs largely because of the crisis nature of their illness, the threat of blindness and the separation from family and friends during treatment, sometimes for an extended period.

Because of the large number of glaucoma patients under treatment in the clinic and the serious nature of their problems, it is urgent to seek ways to understand and serve them as a group. Consequently, in the past year we have used medical social work students from Boston University and Simmons College to carry out a general survey of the unique characteristics of glaucoma patients coming to the Eye Clinic.

During the past year, of the 891 hospitalized patients given occupational therapy, 613 were eye cases. The Occupational Therapy Department continued its teaching and training program in '59-'60 both within the hospital and for some work outside. During the year there were nine clinical training students from the Tufts University-Boston School of Occupational Therapy.

EDWIN B. DUNPHY, M.D.
Chief of Ophthalmology

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Directory

MEMBERS OF INFIRMARY STAFF, ALUMNI AND RESIDENTS



Names of members of the Infirmary Staff are printed in capital letters.

Abbreviations following the name indicate to what service of the Infirmary the individual belongs:

Anes.; Anesthesiology
Bron.; Bronchoscopy
Esoph.; Esophagoscopy

Laryn.; Otolaryngology
Oph.; Ophthalmology
Otol.; Otology
Rad.; Radiology

Letters in small type preceding the abbreviations indicate the special work of the individual:

a.; assistant
assoc.; associate
audiol.; audiologist
biochem.; biochemist
biol.; biologist
c.; chief of service
cons.; consulting
dir.; director

elect. eng.; electronics engineer
fel.; fellow
path.; pathologist
r.; resident
roent.; roentgenologist
s.; surgeon
s.p.o.; surgeon for plastic operations
sr.; senior

As of January 1, 1961

ADAMS, SAMUEL T., Oph. 1951
1610 Pine Ave., W., Montreal, Que., Canada

ADKINS, HOWARD E. (r. Oph.)

ALBAUGH CLARENCE H., Oph. 1940
727 W. 7th, Los Angeles, Cal.

ALEXANDER, SEYMAN L., Aural 1919
170 St. George, Toronto, Ont., Canada

ALLEN, HENRY F., (assoc. s. Oph.), Oph. 1949
200 Beacon, Boston, Mass.

ALLEN, JOHN H., Aural 1904
32 Deering, Portland, Me.

ALLMAN, CHARLES H. (sr. cons. s. Laryn.),
Laryn. 1930
520 Commonwealth Ave., Boston, Mass.

ALPERT, D. ROBERT (a.s. Oph.)
1101 Beacon, Brookline, Mass.

ANGELINI, HUGO D. (a.s. Laryn.), Laryn. 1951
3 Seaward Rd., Wellesley Hills, Mass.

ANTHONY, ALAN R., Oph. 1936
736 Granville, Vancouver, B. C., Canada

ANTHONY, MARC, Oph. 1929
508 Old Nat'l. Bank Bldg., Spokane, Wash.

ARSLAN, HIMLI (res. assoc. Otol.)
Sanborn Co., 175 Wyman, Waltham, Mass.

AYASH, JOHN J., Laryn. 1946
119A Main South, Minot, N. D.

BAHN, GUSTAV C., Oph. 1948
921 Canal, New Orleans, La.

BAIR, HUGO L. Oph. 1932
102 Second Ave., S.W., Rochester, Minn.

BALAZS, ENDRE A. (biochem. & assoc. dir.
Ret. Fd.)
30 Chambers, Boston, Mass.

BALLINGER, JOHN J., Laryn. 1943
636 Church, Evanston, Ill.

BARROS, PAULO (fel. Oph.)

BARTON, RICHARD T., Laryn. 1945
9730 Wilshire Blvd., Beverly Hills, Cal.

BASSEN, EDWARD J., Oph. 1928
70 E. 66th, N. Y. C.

ONE HUNDRED AND THIRTY-FOURTH ANNUAL REPORT

BAUER, FREDERICK, Aural 1902

BECHTEL, EDWARD J., Oph. 1957
419 N. Newport Blvd., Newport Beach, Cal.

BECK, PETER (a. Oph.), Oph. 1954
(*leave of absence*)
43 Austin, Portsmouth, N. H.

BEETHAM, WILLIAM P. (s. Oph.), Oph. 1929
108 Bay State Rd., Boston, Mass.

BEYER, NORMAN E. (fel. Oph.)

BIRDSALL, CLARENCE H., Aural 1916, Oph. 1918
26 Summer, Haverhill, Mass.

BLACK, DANIEL E., Laryn. 1944
174 Main, Nashua, N. H.

BOBBETT, GORDON H., Laryn. 1948
161 W. Cheeves, Florence, S. C.

BOGAN, FREDERICK L. (sr. cons. s. Laryn.)
Aural 1908
112 Stratford Rd., W. Roxbury, Mass.

BOIES, LAWRENCE R., Laryn. 1931
90 S. 9th, Minneapolis, Minn.

BOIES, LAWRENCE R., JR. (r. Laryn.)

BORUCHOFF, S. ARTHUR (a. Oph.)
192 Bay State Rd., Boston, Mass.

BRACONIER, HARRY E. (a. s. Oph.), Oph. 1945
1180 Beacon, Brookline, Mass.

BRADY, FRANK W. (a. s. Laryn.), Laryn. 1942
8 Merrimac, Lowell, Mass.

BRANCO, ADOLFO, Laryn. 1958
Lempert Institute, 119 E. 74th, N. Y. C.

BREED, FREDERIC B. (a. s. Oph.), Oph. 1950
Route 128, Exit 14 East, Danversport, Mass.

BREWER, DAVID W., Laryn. 1948
1100 E. Genessee, Syracuse, N. Y.

BROCKHURST, ROBERT J. (a. s. Oph.),
Oph. 1951
99 W. Cedar, Boston, Mass.

BROWN, LESTER A., JR., Laryn. 1937
478 Peachtree, Atlanta, Ga.

BROWN, ROBERT M. (elect. eng. Otol.)
M.I.T., Cambridge, Mass.

BRYAN, BURTON D., Laryn. 1943
151 Rock, Fall River, Mass.

Bullington, S. James (a. Oph.), Oph. 1956
Geisinger Memorial Hospital, Danville, Pa.

BURKE, J. ROBERT, Oph. 1918, Aural 1919, Retired
465 Eighth Ave., N.E., St. Petersburg, Fla.

BURRAGE, WALTER S. (res. assoc. Otol.)
330 Dartmouth, Boston, Mass.

CALNAN, ARTHUR F. (a. Oph.)
534 Beacon, Boston, Mass.

CAMERON, WALTER C., Oph. 1930
740 St. Helens Ave., Tacoma, Wash.

CANDRAY, CARLOS H., Oph. 1944
San Salvador, El Salvador, C. A.

CARON, ARMAND L., Laryn. 1927
Medical Arts Bldg., Worcester, Mass.

CARROLL, FRANK D., Oph. 1935
635 W. 165th, N. Y. C.

CARROLL, JOHN M. (r. Oph.)

CARROLL, WALTER J. E. (s. Laryn.)
5 Chestnut, Arlington, Mass.

CARTER, LELAND F., Oph. 1926
1553 Woodward Ave., Detroit, Mich.

CASE, PAUL H., Oph. 1938
550 W. Thomas Rd., Phoenix, Ariz.

Castellanos, Carlos A., Laryn. 1960
6a Calle 16-60 Zona 1, Guatemala City

CASTEN, VIRGIL G. (s. Oph.), Oph. 1931
412 Beacon, Boston, Mass.

CAVANAUGH, THOMAS (assoc. s. Oph.),
Oph. 1940
403 Commonwealth Ave., Boston, Mass.

CAVE, LINUS S., Laryn. 1927
129 W. Borden Ave., Syracuse, N. Y.

CERRATO, CALVIN M., Laryn. 1944

CHAMBERLAIN, CALVIN B., Oph. 1944
174 Nemaha, Pomona, Cal.

CHANDLER, PAUL A. (sr. cons. s. Oph. & assoc.
dir. Oph. r. training), Oph. 1925
5 Bay State Rd., Boston, Mass.

CHAPMAN, RICHARD B. (a. Oph.), Oph. 1955
743 High, Dedham, Mass.
32 Greenleaf, Quincy, Mass.

CHASIN, WERNER D. (r. Laryn.)

CHISHOLM, JULIAN F., JR., (a. s. Oph.)
330 Dartmouth, Boston, Mass.

CICCARELLI, EUGENE C. (r. Oph.)

CLARKE, SAMUEL T., Oph. 1939
130 N. Virginia, Reno, Nev.

CLOUGH, JOSEPH M. (a. s. Oph.), Laryn. 1939
Oph. 1941
266 Beacon, Boston, Mass.

MASSACHUSETTS EYE AND EAR INFIRMARY

Clubb, Robert W., Laryn. 1960
Lockland AFB Hospital, San Antonio, Texas

COGAN, DAVID G. (s. Oph. & dir. Howe Lab.),
Oph. 1935 (leave of absence)
243 Charles, Boston, Mass.

COGAN, JAMES R., Oph. 1944
414 N. Camden Dr., Beverly Hills, Cal.

COLLINS, CLARK S., Laryn. 1959
709 Dunbar, Greenville, S. C.

CONTRERAS, JOEL (fel. Oph.)

CONVERSE, JOHN M., Laryn. 1938
722 Park Ave., N. Y. C.

COOPER, KEMP G., Laryn. 1940
3705 E. Colfax Ave., Denver, Colo.

CORDRAY, DAVID P., Laryn. 1940
350 N. Milwaukee Ave., Libertyville, Ill.

COVITZ, EDWARD E. (a. s. Oph.)
475 Commonwealth Ave., Boston, Mass.

COYLE, JOHN A., Oph. 1931
Norwich, Vt.

CREWSON, ARTHUR L., Laryn. 1927
132 Second, W. Cornwall, Ont., Canada

CRIST, ALAN (elect. eng. Otol.)

CRONIN, THOMAS P. (a. s. Oph.), Oph. 1950
94 Pleasant, Arlington, Mass.
270 Commonwealth Ave., Boston, Mass.

DAVIDSON, HERMAN P., Oph. 1920

DAY, KENNETH, Laryn. 1924
121 University Pl., Pittsburgh, Pa.

DEAN, ABBOTT M., Oph. 1929
536 First Ave., Council Bluffs, Iowa

DEBLOIS, ELIZABETH (a. s. Laryn.)
247 Commonwealth Ave., Boston, Mass.

DIETRICH, HERBERT J., Laryn. 1951
2035 Delancy Pl., Philadelphia 3, Pa.

DIPIERO, RANIERO (fel. Anes.)

DOBBIE, JAMES G. (fel. Oph.)

DOHLMAN, CLAES-HENRIK (fel. Oph.)

DONAHUE, HUGH C., Oph. 1931
520 Commonwealth Ave., Boston, Mass.

DONALDSON, DAVID D. (a. Oph.), Oph. 1953
243 Charles, Boston, Mass.

DONOGHUE, WILLIAM F., Laryn. 1942, Oph. 1944
69 Chestnut, Springfield, Mass.

DOWLING, JOSEPH L., Oph. 1918
207 Waterman, Providence, R. I.

DOWLING, JOSEPH L., JR., (a. Oph.), Oph. 1957
207 Waterman, Providence, R. I.

DOYLE, SAMUEL C., Laryn. 1957
20 Occom Ridge, Hanover, N. H.

DROOKER, J. CHARLES (s. Laryn.), Laryn. 1939
285 Commonwealth Ave., Boston, Mass.

DRURY, DANA W., Aural 1906
Sanderson Rd., Littleton, Mass.

DUCLOS, GASTON N., Laryn. 1943, Oph. 1945
1538 Sherbrooke, W. Montreal, Que., Canada

DUNPHY, EDWIN B. (c. Oph.), Oph. 1923
243 Charles, Boston, Mass.

EASTON, MAHLON T. (s. Oph.), Oph. 1936
70 Carlton, Brookline, Mass.

ERGIN, KAMIL (fel. Anes.)

ERNLUND, CARL H. (sr. cons. s. Laryn.),
Laryn. 1927
12 Bay State Rd., Boston, Mass.

EVANS, MAURICE G. (sr. cons. s. Laryn.),
Laryn. 1928
416 Marlborough, Boston, Mass.

EVANS, WILLIAM H., Oph. 1924
16 Wick Ave., Youngstown, Ohio

FARRELL, JAMES I., Oph. 1932
301 Kempf Bldg., Utica, N. Y.

FILMER, GEORGE A., Oph. 1939
227 16th, Denver, Colo.

FINK, ROBERT J., Oph. 1955
133 Hawthorne Rd., Hopkins, Minn.

FISHER, STANWOOD E., Aural 1909
338 Spring, Portland, Me.

FLOYD, PAUL E., Oph. 1946
2 Middle, Farmington, Me.

FODOR, JULIANNA (fel. Oph.)

FOOTE, CHARLES M., Oph. 1940
412 N. Hastings Ave., Hastings, Neb.

FRACKLETON, RALPH J., Laryn. 1933
15701 Detroit Ave., Lakewood, Ohio

FRAME, STUART M., Laryn. 1956
216 Alexander, Rochester, N. Y.

FRANKLIN, C. RAY, Oph. 1931
10 E. 90th, N. Y. C.

FRAZEE, JOHN R. (s. Laryn.), Laryn. 1934
1180 Beacon, Brookline, Mass.
743 High, Dedham, Mass.

ONE HUNDRED AND THIRTY-FOURTH ANNUAL REPORT

FRED, GUSTAVE B. (sr. cons. s. Laryn.),
Laryn. 1925
475 Commonwealth Ave., Boston, Mass.

FREEMAN, SUMNER, L., Laryn. 1959
St. Luke's Hospital
421 W. 113th, N. Y. C., 25

FREESE, CARL GATES, JR. (a. Oph.), Oph. 1958
328 Washington, Wellesley Hills, Mass.

FRIEDMAN, EPHRAIM (r. Oph.)

FUJITA, SHIRO (r. Laryn.)

FULTZ, WILLIAM E., Oph. 1927
Glace Bay, N. S., Canada

FUTTERMAN, SIDNEY (biochem.)

GABRIELS, JOSEPH A. D., Oph. 1921
481 Western Ave., Albany, N. Y.

GAUDREAU, HONORE E., Oph. 1930
293 Bridge, Springfield, Mass.

GEHRING, JOHN R. (r. Oph.)

GERMAIN, HARRY H., Oph. 1899
479 Commonwealth Ave., Boston, Mass.

GIFFORD, HAROLD, JR., Oph. 1934
1620 Medical Arts Bldg., Omaha, Neb.

GILBERT, JOHN J., Oph. 1917, Aural 1920
209 Angell, Providence, R. I.

GILLER, HERBERT, Oph. 1952
2040 W. Winconsin Ave., Milwaukee, Wis.

GILLESPIE, ELMER H., Laryn. 1932
906 S. Fort Harrison Ave., Clearwater, Fla.

GINSBERG, JOSEPH, Oph. 1953
3115 Burnet Ave., Cincinnati, Ohio

GODUTI, RICHARD J., Oph. 1946
704 Congress, Portland, Me.

GOFFIN, FLOYD B. (r. Oph.)

GOLDCAMP, RICHARD R., Laryn. 1948
16 Wick Ave., Youngstown, Ohio

GOLDMAN, A. MILTON, Oph. 1924
Rockville, N. Y.

GOODALE, ROBERT L. (sr. cons. s. Laryn.),
Laryn. 1926
330 Dartmouth, Boston, Mass.

GOODALL, EDWIN B. (a. s. Oph.), Oph. 1952
(*leave of absence*)
N. Main, Wolfeboro, N. H.

GOODELL, WILLIAM, Aural 1906
Halladay Ave., Suffield, Conn.

GOSTELI, JACQUES (biochem.)

GOTLIB, BERNARD N., Laryn. 1959
USAF Hosp., Weisbaden, APO 633, N. Y. C.

GRANT, W. MORTON (assoc. s. Oph. & dir.
Glaucoma Cons. Serv.),
243 Charles, Boston, Mass.

GRAY, GERALD H., Laryn. 1929
418 30th, Oakland, Cal.

GRIFFEY, LOUIS E. (a. Laryn.), Laryn. 1957
25 W. Central, Natick, Mass.

GUIMARAES, JOAO C., Laryn. 1946
Rua David Campista 67, Botafogo, Rio,
Brazil, S. A.

GULICK, ROBERT P. (r. Laryn.)

GUNDERSEN, TRYGVE (s. Oph.), Oph. 1930
534 Beacon, Boston, Mass.

HACKING, RAYMOND F., Oph. 1927
105 Waterman, Providence, R. I.

HAKIM, ARCADIUS, Laryn. 1954
U. S. Naval Dispensary, Washington, D. C.

HALEY, WARREN D. (a. s. Oph.), Oph. 1950
78 Church, Winchester, Mass.

HALTON, EDWARD J., Laryn. 1942
337 Appleton, Holyoke, Mass.

HAPP, LINLEY C., Laryn. 1931, Oph. 1943
170 Waterman, Providence, R. I.
502 Newport Ave., Pawtucket, R. I.

Hardenbergh, Firmon E., Oph. 1960
45 Badgee Rd., Annapolis, Md.

HARRIS, DENNIS (fel. Oph.)

HAYDEN, WILLIAM L. (r. Laryn.)

HEATH, PARKER (sr. cons. Oph. Path.)
Sullivan Harbor, Me.

HEINICKE, HORST J., Laryn. 1948
116 W. Buffalo, Ithaca, N. Y.

HENNESSEY, WILLIAM W., Aural 1908
33 Essex, Salem, Mass.

HENRY, MORRISS M., Oph. 1959
602 Garrison Ave., Fort Smith, Ark.

HERM, ROBERT J. (a. Oph.), Oph. 1955
740 Main, Waltham, Mass.

HERMAN, EDWARDS W. (sr. cons. s. Laryn.)
Silver Hill Rd., Lincoln, Mass.

Hicks, Julius N., Laryn. 1960
916 Medical Arts Bldg., Birmingham, Ala.

MASSACHUSETTS EYE AND EAR INFIRMARY

HILL, FREDERICK T., Aural 1916
111 Main, Waterville, Me.

HILL, JOHN M. (a. s. Oph.)
108 Bay State Rd., Boston, Mass.

HILL, KEVIN (r. Oph.)

HINCKLEY, RALPH W. (r. Oph.)

HIRSCH, LAWRENCE S. (a. Laryn.)
42 Lincoln, Framingham, Mass.

HO, ALBERT K. T., Laryn. 1949
Central Medical Bldg., Beretania & Kalakaua,
Honolulu, T. H.

HOBART, CARL, Oph. 1922
3601A Gravois Ave., St. Louis, Mo.

HOLLABAUGH, CHARLES F., Oph. 1932
1915 Church, Nashville, Tenn.

HOLMES, EDGAR M. (s. p. o.), Laryn. 1934
330 Dartmouth, Boston, Mass.

HOLT, LAWRENCE B., Oph. 1948
208-209 Reynolds Bldg., Winston-Salem, N. C.

HOOPLE, GORDON D., Laryn. 1926
1100 E. Genessee, Syracuse, N. Y.

HOUSTON, G. GILBERT, Laryn. 1938
170 Fitzroy, Charlottetown, P. E. I., Canada

HOWARD, DONALD O., Oph. 1941
201½ N. Main, Wichita, Kan.

HOWARD, JED L. (r. Oph.)

HURLEY, PAUL D. (a. Oph.)
270 Commonwealth Ave., Boston, Mass.

HURST, ALFRED L. (a. Laryn.), Laryn. 1959
98 Adams, Milton, Mass.

IRELAND, PERCY E., Laryn. 1935
170 St. George, Toronto, Ont., Canada

IRGENS, EDWIN R., Laryn. 1938
519 Ship, St. Joseph, Mich.

IRVINE, A. RAY, JR., Oph. 1947
9730 Wilshire Blvd., Beverly Hills, Cal.

IRVINE, A. RODMAN, Oph. 1935
9730 Wilshire Blvd., Beverly Hills, Cal.

IRVINE, WENDELL, Oph. 1941
2010 Wilshire Blvd., Los Angeles, Cal.

IRWIN, JOHN W. (dir. Micro-Circ. lab. &
coordinator Laryn. Res.)
243 Charles, Boston, Mass.

JAKO, GEZA (fel. Laryn.)

JAKUS, MARIE (biol.)

JESBERG, NORMAN, Laryn. 1947
Eye & Ear Hospital, 500 S. Lucas Ave.,
Los Angeles, Cal.

JEWETT, EVERETT P., Oph. 1945
65 Elm, Worcester, Mass.

JOHNSON, CARL C. (assoc. s. Oph.) Oph. 1942
5 Bay State Rd., Boston, Mass.

JOHNSON, DAVID S., Oph. 1956
Hauser Clinic, 7411 Third Ave., Detroit, Mich.

JOHNSON, LORAND V., Oph. 1937
10515 Carnegie Ave., Cleveland, Ohio

JOHNSON, LOUIS L., Oph. 1960
Doctors' Center, Dothan, Ala.

JONES, EDWARD E., Laryn. 1928
141 Elm, Brockton, Mass.

JUDD, DELBERT K., Laryn. 1934
187 S. Schuyler Ave., Kankakee, Ill.

KANT, ALFRED, Oph. 1948
40 Public Square, Watertown, N. Y.

KARLIN, DAVID B. (fel. Oph.)

KAUFMAN, HERBERT E. (r. Oph.)

KAZANJIAN, KENNETH A. (a. s. Laryn.)
475 Commonwealth Ave., Boston, Mass.

KAZANJIAN, VARAZTAD H. (sr. cons. s. p. o.)
475 Commonwealth Ave., Boston, Mass.

KELEMEN, GEORGE (sr. res. cons. Laryn.)
243 Charles, Boston, Mass.

KELLEY, VINCENT J. (s. Laryn.)
520 Commonwealth Ave., Boston, Mass.

KENNEALLEY, ELMER V., Oph. 1952
479 Main, Greenfield, Mass.

KENNEDY, MICHAEL F., Oph. 1927
1835 I, N.W., Washington, D. C.

KENT, CHARLES (assoc. s. Laryn.)
270 Commonwealth Ave., Boston, Mass.

KERN, HAROLD (biochem.)

KHU, ANNE (fel. Oph.)

KIANG, NELSON Y-s (res. a. Otol.)

KING, DAVID G., Laryn. 1951
605 Commonwealth Ave., Boston, Mass.

KING, MERRILL J., (sr. cons. s. Oph.),
Oph. 1932
22 White, Rockland, Me.

KING, MERRILL J., JR., Oph. 1956
22 White, Rockland, Me.

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KINOSHITA, JIN H. (biochem.)

KLOTZ, ROBERT E. (a. s. Laryn., a. s. Winthrop Fd.), Laryn. 1956
Salada Bldg., Berkeley & Stuart, Boston, Mass.
328 Washington, Wellesley, Mass.

KNOX, DAVID L. (fel. Oph.)

KOCH, ALBERT E. (audiol.)

Kos, CLAIRE M., Laryn. 1941
University Hospital, Iowa City, Iowa

KUPFER, CARL (a. Oph.)
243 Charles, Boston, Mass.

KUWABARA, TOICHIRO (assoc. Oph. path.)
243 Charles, Boston, Mass

LANE, CHARLES S., Laryn. 1949
1214 N. B., Fort Smith, Ark.

LANGSWORTHY, HENRY G., Aural 1907
394 W. 10th, Dubuque, Iowa

LAPIERRE, WARREN W., Oph. 1948
32 Clinton Ave., Norwichtown, Conn.
10 Shetucket, Norwich, Conn.

LAVOIE, ROLAND, JR., Laryn. 1950
3 Claire Fontaine, Quebec City, Que., Canada

LAWLOR, ROBERT C. (a. Oph.), Oph. 1959
9 Central, Lowell, Mass.

LEAHEY, BREN DAN D. (s. Oph.), Oph. 1933
9 Central, Lowell, Mass.

LEAVELLE, ROBERT B., Oph. 1953
4747 Vineland Ave., N. Hollywood, Cal.

LECONTE, CHARLES M., Laryn. 1947
Rue Royale, Cap-Haitien, Haiti

LEMOINE, ALBERT N., JR., Oph. 1945
4620 J. C. Nichols Pkwy., Kansas City, Mo.

LENTINE, JOSEPH (s. Laryn.), Laryn. 1935
15 Bay State Rd., Boston, Mass.

L'ESPERANCE, FRANCIS A., JR., Oph. 1960
1 East 71st, N. Y. C.

LEVITT, JESSE M., Oph. 1933
515 Ocean Ave., Brooklyn, N. Y.

LEWIS, DONALD K. (assoc. s. Laryn., dir. Winthrop Fd.), Laryn. 1943
243 Charles, Boston, Mass.
15 Dix, Winchester, Mass.

LIEBMAN, SUMNER D. (assoc. s. Oph.), Oph. 1943
115 Bay State Rd., Boston, Mass.
39 Elm, Southbridge, Mass.

LILLY, JOHN S., Laryn. 1951
215 E. Columbus, Kenton, Ohio

LIM, DOMINIC (fel. Anes.)

LINCOFF, WILLIAM, Oph. 1954
302 E. 9th, Chester, Pa.

LINEBACK, MERRILL I., Laryn. 1952
219 W. Georgia Ave., College Park, Ga.

LINGEMAN, BYRON S. (a. Oph.), Oph. 1960
328 Washington, Wellesley Hills, Mass.

LODGE, EDMUND A., Laryn. 1924
24 Pleasant, Gloucester, Mass.

LOFGREN, ROBERT H. (r. Laryn.)

LOTHROP, OLIVER A., Aural 1911
91 Neshobe Rd., Waban, Mass.

LOUGE, JOHN L., Aural 1909
195 St. Paul, Brookline, Mass.

LOVELY, DAVID K., Laryn. 1946
73 Deering, Portland, Me.

LOVESY, BURTON E., Laryn. 1935
15 W. Central, Natick, Mass.

LURIE, MOSES H. (sr. cons. s. Laryn.)
483 Beacon, Boston, Mass.

MACDONALD, ALEXANDER E., Oph. 1923
421 Medical Arts Bldg., Toronto, Ont., Canada

MACDONALD, DONALD H., Laryn. 1930
VA Hospital, Augusta, Ga.

MACHAMER, R. WENNER, Laryn. 1945
2060 E. Ninth, Cleveland, Ohio

MACKENZIE, ROLAND C., Oph. 1911
30 Grant, Waltham, Mass.

MACLAUGHLIN, CHARLES H. (a. s. Oph.),
Oph. 1947
834 Broadway, Everett, Mass.

MACMILLAN, ALEXANDER S., (sr. cons. roent.)
483 Beacon, Boston, Mass.

MACMILLAN, ALEXANDER S., JR. (dir. rad.)
483 Beacon, Boston, Mass.

MACNIE, JOHN P., Oph. 1929
635 W. 165th, N. Y. C.

MALKOFF, JACK, Laryn. 1955
1105 Belmont Ave., Youngstown, Ohio

MANCALL, IRWIN T. (a. Oph.), Oph. 1952
750 Main, Hartford, Conn.

MANGIARACINE, ANITA (bact.)
243 Charles, Boston, Mass.

MASSACHUSETTS EYE AND EAR INFIRMARY

MARFEY, S. PETER (biochem.)

MARTIN, S. FORREST (a. s. Oph.), Oph. 1938
165 Bay State Rd., Boston, Mass.

MARTINEZ, DANIEL E. M., Laryn. 1953
Veterans Hosp., Dallas, Tex.

MARTOLA, EEVA-LISA M. (fel. Oph.)

MATTIS, ROBERT DEAN, Oph. 1942
634 N. Grand Blvd., St. Louis, Mo.

MCCABE, FRANK J., Oph. 1916
204 Angell, Providence, R. I.

McCALL, ROBERT E., Laryn. 1938
236 S. Main, Marion, N. C.

McCLINTOCK, WALTER L., Laryn. 1938

McENEANEY, JOSEPH P., Laryn. 1947
301 Essex, Lawrence, Mass.

McGUIGAN, G. EDMUND, Oph. 1924
26 W. King, York, Pa.

McINTIRE, FREDERIC J., Oph. 1910
63 N. Common, Lynn, Mass.

McKEIGUE, JOHN E. (assoc. s. Laryn.),
Laryn. 1949
274 Commonwealth Ave., Boston, Mass.
94 Pleasant Ave., Arlington, Mass.

McKENZIE, RODNEY J., Laryn. 1942
480 Doctors' Bldg., 19 Garfield Pl., Cincinnati,
Ohio

MCLEOD, ANGUS M., Laryn. 1942
Medical Arts Bldg., Toronto, Ont., Canada

MCLEOD, JOHN, Oph. 1930
209 Tower Bldg., 116 W. 47th, Kansas City, Mo.

McMEEL, J. WALLACE (fel. Oph.)

MEEK, RAYMOND E., Oph. 1926
"The North House," Stephentown, N. Y.

MELTZER, PHILIP E. (c. Laryn. & s. Winthrop
Fd.), Aural 1919
243 Charles, Boston, Mass.
285 Commonwealth Ave., Boston, Mass.

MERTINS, PAUL S., Laryn. 1936
46 Clayton, Montgomery, Ala.

MESSENGER, HARRY K., Oph. 1934
140 Marlborough, Boston, Mass.

MEYER, MONTO F., Oph. 1919
904 Canal Bank Bldg., New Orleans, La.

MILAM, DANIEL F., Oph. 1955

MILES, NATHAN E., Oph. 1937
1031 S. 21st, Birmingham, Ala.

MILLER, DANIEL (assoc. s. Tumor Clinic),
Laryn. 1943
60 Charlesgate West, Boston, Mass.

MILLS, LLOYD, JR., Oph. 1947
1136 West 6th, Los Angeles, Cal.

MISHIMA, SAIICHI (fel. Oph.)

MONTGOMERY, WILLIAM W. (assoc. s.
Laryn. & a. to c. Laryn.) Laryn. 1955
243 Charles, Boston, Mass.

MOORE, DONALD E., Oph. 1937
713 E. Genessee, Syracuse, N. Y.

MOORE, EDWARD E., Oph. 1944
200 Battery Park Ave., Asheville, N. C.

MOORE, JAMES A., Laryn. 1940
525 E. 68th, N. Y. C.

MOORMAN, JOHN D., Oph. 1939
221 E. Holmes, Huntsville, Ala.

MORGAN, ANNE S. (fel. Oph.)

MORRISSEY, ARTHUR M. (a. s. Oph.)
24 Rural Ave., Medford, Mass.

MOSHER, HENRY A. (a. s. Oph.), Oph. 1941
266 Beacon, Boston, Mass.

MOTELEY, FREDERICK E., Laryn. 1925
Charlotte Eye & Ear Hospital, Charlotte, N. C.

MOULTON, EVERETT C., JR., Oph. 1948
1214 N. B., Fort Smith, Ark.

MOURKIDOU, SOTIRIA (fel. Anes.)

MUELLER, WERNER (dir. Laryn. path. &
Mosher Lab.), Laryn. 1933
243 Charles, Boston, Mass.

MURPHY, WILLIAM E., Laryn. 1933
390 Main, Worcester, Mass.

MYERS, ROSCOE W., Oph. 1927
36 Pleasant, Worcester, Mass.

MYERS, STANLEY A., Laryn. 1937
3119 Market, Youngstown, Ohio

MYSEL, PHILIP (sr. cons. s. Laryn.)
40 Carlton, Brookline, Mass.

NACHLAS, N. EDWARD, Laryn. 1951
2 E. Read, Baltimore, Md.

NAVAS, LUIS, Laryn. 1950
Apartado N. 376, Managua, Nicaragua, C. A.

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NICHOLSON, HARRY M., Aural 1913
1 Young, Hamilton, Ont., Canada

NOWAK, HERBERT (biochem.)

NOWAK, MARGARITA (biochem.)

O'BRIEN, DONALD F. (elect. eng. Otol.)

O'CONNELL, JOHN D., Oph. 1943
50 Farmington Ave., Hartford, Conn.

O'CONNOR, MICHAEL JOHN, Aural & Lar. 1923
105 Waterman, Providence, R. I.

OFFENBACH, BERTHA (a. Oph.)
51 Homer, Newton Centre, Mass.

OGDEN, FREDERIC W., Laryn. 1942
19 E. Center, Fayetteville, Ark.

OKAMURA, ICHIRO D. (a. s. Oph.), Oph. 1952
99 W. Cedar, Boston, Mass.

OLDS, BOMAR A., Laryn. 1929
124 W. Princeton Ave., College Park, Ga.

OLIVE, GEORGE M., JR. (a. Oph.), Oph. 1959
270 Commonwealth Ave., Boston
18 Moore, Belmont, Mass.

OLIVER, PETER (r. Laryn.)

PAPPAS, STEPHEN S. (fel. Oph.)

PARKER, HARRY C., Oph. 1902
831 Garfield, Hobart, Ind.

PATTERSON, WILLIAM J., Laryn. 1956
1541 W. Broadway, Vancouver 9, B. C.

PAVLO, IRVING L. (a. Oph.)
330 Dartmouth, Boston, Mass.
50 Shepard, Cambridge, Mass.

PERONE, PIERO, Laryn. 1955

PERRETTEN, FRANK A., Oph. 1957
208 Reynolds Bldg., Winston-Salem, N. C.

PFISTER, RAYMOND L., Laryn. 1952
1298 Herschel Ave., Cincinnati, Ohio

PHILLIPS, CALBERT I. (fel. Oph.)

PIERCE, DAVID L. (r. Laryn.)

PINKERTON, RONALD M. (fel. Oph.)

PIPPITT, RICHARD B. (a. s. Oph.), Oph. 1949
328 Washington, Wellesley Hills, Mass.

POLLEN, ABRAHAM (assoc. s. Oph.), Oph. 1944
636 Beacon, Boston, Mass.

POLLOCK, FREDERIC J., Laryn. 1935
104 S. Michigan Ave., Chicago, Ill.

POPPEN, MAYO J., Oph. 1948
14426 Van Nuys Blvd., Van Nuys, Cal.

POSNER, MARVIN, Oph. 1952
1101 Madison Ave., Albany 8, N. Y.

PRICE, R. RAYMOND, Oph. 1936
118 Rutledge Ave., Charleston, S. C.

PROVOST, ADOLPHE J., Laryn. 1927
1458 Elm, Manchester, N. H.

PRUDHON, CHARLES A., Laryn. 1927
168 Sterling, Watertown, N. Y.

PULLEN, FREDERIC W., II (r. Laryn.)

QUEVEDO, A. ARTURO, Oph. 1933
4a Ave., Sur 19, Guatemala City, Guatemala,
C. A.

QUEVEDO, JULIO, Laryn. 1941
15 Calle 6-59, Guatemala City, Guatemala, C. A.

RAGAN, JOHN D., Oph. 1954
736 Granville, Vancouver 2, B. C.

RAMBO, J. H. TOM, Laryn. 1948
535 Park Ave., N. Y. C.

RAYNES, ALPHONSE F., Oph. 1923
209 Miller Ave., Portsmouth, N. H.

REAGAN, DANIEL J., Oph. 1943, Laryn. 1944
507 Main, Worcester, Mass.

REED, GEORGE F. (assoc. s. Laryn.), Laryn. 1952
Salada Bldg., Berkeley & Stuart, Boston
328 Washington, Wellesley Hills, Mass.

REGAN, CHARLES D. J. (a. Oph.), Oph. 1953
99 W. Cedar, Boston, Mass.

REUTER, S. HAROLD (r. Laryn.)

RICE, EARLE W., Laryn. 1953
390 Main, Worcester, Mass.

RICE, THEODORE A., Oph. 1942
2021 N. Central, Phoenix, Ariz.

RICHARDS, LYMAN G. (sr. cons. s. Laryn.),
Laryn. 1924
Medical Dept., M.I.T., Cambridge, Mass.

RICHARDSON, JOHN R. (s. Laryn., s. Bron. &
Esoph.), Laryn. 1935
403 Commonwealth Ave., Boston, Mass.

RICHLIN, JAY J. (r. Oph.)

RIEMER, KARL (a. s. Oph.), Oph. 1943
403 Commonwealth Ave., Boston, Mass.

RIFE, CHARLES J., Oph. 1958
716 N. Lime, Lancaster, Pa.

MASSACHUSETTS EYE AND EAR INFIRMARY

RING, HENRY G. (a. Oph.), Oph. 1958
111 Maple, Springfield, Mass.

ROBINSON, MENDELL (a. s. Laryn.), Laryn.
1957
206 Waterman, Providence, R. I.

ROGERS, WILLIAM P., JR. (a. s. Laryn.)
275 Charles, Boston, Mass.
101 River Rd., Weston, Mass.

ROOPENIAN, ARAM (assoc. s.), Laryn. 1944
475 Commonwealth Ave., Boston, Mass.

ROSENBLITH, WALTER A. (res. assoc. Otol.)
M.I.T., Cambridge, Mass.

ROSENTHAL, PERRY (r. Oph.)

ROTHWELL, STEPHEN C., Laryn. 1925
S. Dartmouth, Mass.

RUGGLES, RALPH H. (sr. cons. s. Oph.), Oph.
1920
135 County on Rt. 109, Medfield, Mass.

RUNGE, PAUL M. (a. Oph.)
140 Marlborough, Boston, Mass.
47 W. Elm, Brockton, Mass.

RUTNIN, UTHAI (fel. Oph.)

SABATES, FELIX N. (fel. Oph.)

SACHS, BARUCH J. (a. Oph.), Oph. 1957
636 Beacon, Boston, Mass.

SACHS, BENJAMIN (sr. cons. s. Oph.), Oph. 1925
636 Beacon, Boston, Mass.

SADE, JACOB, Laryn. 1958
47 Rothchild Blvd., Tel Aviv, Israel

SAEED, YUNIS M., Laryn. 1954
1634 S. Grant, San Mateo, Cal.

SAINSBURY, AUGUSTUS W., Laryn. 1943
134 N. Main, Canandaigua, N. Y.

SAMS, JAMES M., Laryn. 1949
200 W. Market, Johnson City, Tenn.

SARGENT, FRANCIS B., Aural & Lar., 1923
124 Waterman, Providence, R. I.

SAVAGE, ROSS E., Oph. 1910
201 Main, Gloucester, Mass.

SCARNEY, HERMAN D., Oph. 1928
3011 W. Grand Blvd., Detroit, Mich.

SCHALL, LeROY A. (sr. cons. s. Laryn.)
Scudder Lane, Barnstable, Mass.

SCHEPENS, CHARLES L. (assoc. s. Oph., dir.
Ret. Serv. & dir. Ret. Fd.)
99 W. Cedar, Boston, Mass.

SCHNEBLY, J. THOMAS, Oph. 1936
11134 Georgia Ave., Silver Spring, Md.

SCOTT, ALFRED W. (a. Oph.), Oph. 1955
7 Bay State Rd., Boston, Mass.

SCOTT, DAVID H. (a. s. Oph.), Oph. 1949
7 Thorndike, Beverly, Mass.

SEALE, EARL S. (assoc. s. Oph.), Oph. 1940
126 Bay State Rd., Boston, Mass.

SEBESTYEN, JOHN G. (fel. Oph.)

SHAMBAUGH, GEORGE E., JR., Laryn. 1932
55 E. Washington, Chicago, Ill.

SHAVER, EDWARD F., JR. (r. Laryn.)

SHEA, JOHN J., Laryn. 1953
1018 Madison Ave., Memphis, Tenn.

SHEEHAN, LINUS A., Oph. 1943
210 Angell, Providence, R. I.

SHERMAN, MORRIS, Laryn. 1950
82 W. Commerce, Bridgeton, N. J.

SHORE, SYDNEY (a. Laryn.)
60 Charlesgate W., Boston 15, Mass.

SIMMONS, RICHARD J. (r. Oph.)

SKILLING, FRANCIS C., Oph. 1933
25 S. E. 2nd Ave., Miami, Fla.

SLAUGHTER, EARL C., Laryn. 1940
1265 5th, Norfolk, Neb.

SLOANE, ALBERT E. (assoc. s. Oph. & dir.
Refraction & Limited Vision Clinic)
416 Marlborough, Boston, Mass.

SMITH, HAROLD, Laryn. 1937
1149 N. Garvey Ave., Pomona, Cal.

SMITH, TAYLOR R. (a. s. Oph. & dir. Oph.
path.), Oph. 1951
243 Charles, Boston, Mass.

SMITH, WILLIAM L., Oph. 1950
U. S. Naval Hosp., Philadelphia, Pa.

SNOW, JAMES B., JR., Laryn. 1960
501 Terrace Pl., Norman, Okla.

SNOW, JOHN C. (dir. Anes.)
243 Charles, Boston, Mass.

SNOW, ROBERT G., Laryn. 1940
508 E. S. Temple, Salt Lake City, Utah

SPINOLA, EDMUND T. L., Laryn. 1954
Rua Da Graca 19, Bahia, Brazil, S. A.

SPRATT, CHARLES N., Oph. 1904
5725 N. 11th, Phoenix, Ariz.

STAPFF, VOLKER H., Laryn. 1952
Agraciada 1640, Montevideo, Uruguay, S. A.

STEMMER, AUGUST L., Laryn. 1959
2059 Smith Rd., Hamilton, Ohio

STEPHENS, H. FREDERICK, Oph. 1939
195 Thayer, Providence, R. I.

STERNSTEIN, HERMAN J. (assoc. s. Laryn.)
54 Winter, Norwood, Mass.

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STONE, WILLIAM, JR. (a. s. Oph., dir. Oph. Plastics lab), Oph. 1949
243 Charles, Boston, Mass.
478 Commonwealth Ave., Boston

STONECYPER, DAVID, JR., Oph. 1959
1320 4th Ave., Nebraska City, Neb.

SUDARSKY, RAYMOND DAVID, Oph. 1956
11 E. 68th, N. Y. C.

SULLIVAN, GARRETT L. (s. Oph.), Oph. 1938
275 Charles, Boston, Mass.

SWARTZ, MORRIS (a. Laryn.)
18 Broad, Lynn, Mass.

SWEEBE, EDWARD C. (a. Oph., dir. Boston Eye Bank), Oph. 1959
243 Charles, Boston, Mass.

SWEENEY, DENIS B. (fel. Oph.)

TAYLOR, IRVIN S., Oph. 1958
62 S. Highland Ave., Ossining, N. Y.

TEGELBERG, JULIUS, Laryn. 1931
121 Lincoln, Worcester, Mass.

THOMAS, JOHN H., Laryn. 1944, Oph. 1946
1621 E. Market, Warren, Ohio

THORLAKSON, NEIL F., Oph. 1956
916 Cobb Bldg., Seattle, Wash.

TOOT, J. FREDERICK, Oph. 1922
120 Tyscarawas, W. Canton, Ohio

TOUSSAINT, DANIEL (fel. Oph.)

TRAKAS, JOHN C. (a. Laryn.)
1269 Beacon, Boston, Mass.

TROTTER, ROBERT R. (a. s. Oph.), Oph. 1951
(*leave of absence*)
2917 University Ave., Morgantown, W. Va.

Tucker, Donald P., Oph. 1959
32 S. Goodman, Rochester, N. Y.

TWITCHELL, MARSHALL C., Oph. 1941
217 S. Union, Burlington, Vt.

VAIL, DERRICK T., Oph. 1924
700 N. Michigan Ave., Chicago, Ill.

VERHOEFF, FREDERICK H. (cons. c. Oph.)
252 Pleasant, Marblehead, Mass.

VIGER, ROLAND J., Oph. 1937
Medical Bldg., 1414 Drummond, Montreal, Que., Canada

VON PIRQUET, SILVIO (fel. Oph.)

WALKER, D. HAROLD (sr. cons. s. Laryn.), Aural 1902
Peterborough, N. H.

WATANABE, TAKESHI (fel. Laryn.)

WATTLES, F. MERRILL, Laryn. 1938
1200 Kuhl Ave., Orlando, Fla.

WEBSTER, FRANKLIN R., Oph. 1926
109 S. Warren, Syracuse, N. Y.

WEILLE, FRANCIS L. (s. Winthrop Fd.), Laryn. 1929
247 Commonwealth Ave., Boston, Mass.

WEISER, ALBERT (a. Laryn.)
390 Pine, Fall River, Mass.

WEISMAN, HERMAN J., Laryn. 1944
509 W. Willow, Visalia, Cal.

WEST, FRANCIS J. (a. s. Oph.), Oph. 1947
195 Ashmont, Dorchester, Mass.

WHITNEY, JEREMY B. (r. Oph.)

WHITNEY, RAYMOND C., Oph. 1922
227 Union, New Bedford, Mass.

WIEDMAN, MICHAEL (a. Oph.)
9 Central, Lowell, Mass.

WILKER, SIDNEY R. (a. Laryn.)
285 Commonwealth Ave., Boston, Mass.

WILLIAMS, ALBERT H. (a. Laryn.)
54 Prichard, Fitchburg, Mass.

WILLIS, HARRY C., Aural & Lar. 1923
216 E. Nash, Wilson, N. C.

WINKLER, HERMAN A., Laryn. 1926
224 Thayer, Providence, R. I.

WISHART, DAVID E. S., Aural & Lar. 1922
170 St. George, Toronto, Ont., Canada

WOLF, ERNST (fel. Oph.)

WOODWARD, ARTHUR S., Laryn. 1958
Woodland Clinic Medical Group, Woodland, Cal.

WOODWARD, M. WAYNE, Oph. 1950
20 Battery Park Ave., Asheville, N. C.

WRIGHT, CLARENCE F., Laryn. 1931
Weston, Ont., Canada

WRIGHT, EDWARD N., Laryn. 1933
106 Med. Arts Bldg., Port Arthur, Ont., Canada

ZACHARIAS, LEONA (biol.)
243 Charles, Boston, Mass.

ZANEK, OTTO L., Oph. 1946
802 Travis, Houston, Tex.

ZAVALIA, JULIO U., Laryn. 1958
Av. Hipolito Irigoyen 386, Cordoba, Argentina

ZEAVIN, BERNARD, Oph. 1954
312 S. Washington, Alexandria, Va.

ZIV, BENJAMIN (fel. Oph.)

ZONDERMAN, BERNARD (assoc. s. Laryn. & assoc. s. Winthrop Fd.), Laryn. 1946
285 Commonwealth Ave., Boston, Mass.

ZOVICKIAN, ANTHONY (a. s. Laryn.)
274 Commonwealth Ave., Boston, Mass.

In Memoriam

LEON E. WHITE, M.D.

Senior Consulting Surgeon in Otolaryngology

April 1, 1895—January 12, 1961

1923—Aural House Officer

1925—Assistant Surgeon in Otolaryngology

1939—Surgeon in Otolaryngology

1944—Senior Consulting Surgeon in Otolaryngology

SAMUEL H. WILKINS, M.D.

Senior Consulting Surgeon in Ophthalmology

February 3, 1881—February 2, 1961

1921—Assistant in Ophthalmology

1926—Assistant Surgeon in Ophthalmology

1935—Associate Surgeon in Ophthalmology

1941—Senior Consulting Surgeon in Ophthalmology



